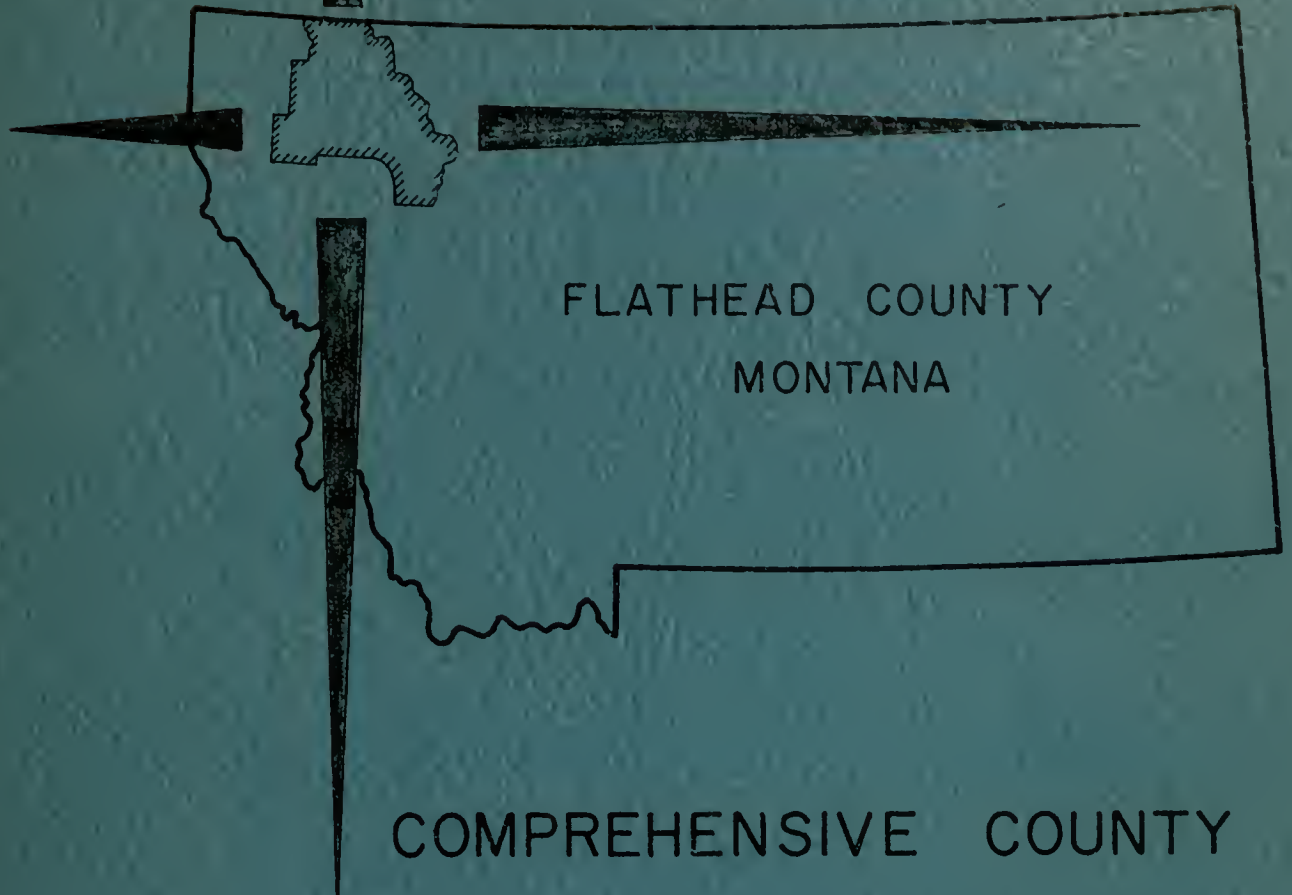


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TABLE OF CONTENTS

		<u>Page No</u>
SECTION I	INTRODUCTION	
	Objectives	1
	History	2
	Physiography	3
	Climatology	4
SECTION II	POPULATION CHARACTERISTICS	
	Introduction	8
	Overall Change	8
	Rural- Urban Relationship	10
	Age-Sex Distribution	11
	Size of Families	12
	Summary	13
SECTION III	AREA ECONOMIC CONDITIONS	
	General Analysis	14
	Labor Force	15
	Area Income	16
	Farm Income	16
	Local Government	19
	Summary	23
SECTION IV	HOUSING	24
SECTION V	PUBLIC UTILITIES	
	Transportation	30
	Natural Gas	30
	Electric Power	30
SECTION VI	NATURAL RESOURCES	
	Minerals	32
	Sand and Gravel	32
	Fish and Game	32
	Timber	33
	Tourism	33
SECTION VII	LAND USE	
	General	34
	Public Lands	35
	Agricultural Lands	35
	Soils	37
SECTION VIII	WATER RESOURCES	
	General	43
	Surface Waters	43
	Ground Water	47
	Water Quality Criteria	48

TABLE OF CONTENTS (Cont.)

		<u>Page No.</u>
SECTION IX	WATER PLAN	
	General	53
	Design Criteria for Public Water Systems	53
	Existing Facilities	55
	County Water Plan	57
SECTION X	SEWER PLAN	
	General	60
	Design Criteria for Public Sewer Systems	61
	Existing Facilities	62
	County Sewer Plan	63
Figure No. 1	Population Trends	Following Page 8
Table No. 1	Temperature & Precipitation	7
Table No. 2	Births, Deaths & Natural Increases	9
Table No. 3	Rural-Urban Population Predictions	10
Table No. 4	Age-Sex Distribution	11
Table No. 5	Size of Families	12
Table No. 6	Employment Data	15
Table No. 7	Flathead County Labor Force	16
Table No. 8	County Sales in Thousands of Dollars	17
Table No. 9	Trend in Farm Income & Operation	18
Table No. 10	Condition of Housing Units	24
Table No. 11	Trend in Agricultural Land Use	36
Table No. 12	Irrigated Land	37
Table No. 13	Water Rights Data	45
Table No. 14	Recorded Stream Flows	46
Table No. 15	Existing Water Facilities	56
Table No. 16	5-10 and 10-20 Year Water Plan	59
Table No. 17	Existing Sewer Facilities	62
Table No. 18	5-10 and 10-20 Year Sewer Plan	64

TABLE OF CONTENTS (Cont.)

<u>Exhibit No.</u>	<u>Title</u>
1	Planning Area Map
2	Topographic Map
3	Public Utilities Map
4	Public Land Map
5	Land Use Map
6	Soil Association Map
7	County Water Map
8	County Sewer Map

Exhibit No. of Public Water Maps

9	Whitefish
10	Columbia Falls
11	Big Fork
12	Columbia Heights
13	Coram
14	Essex
15	Half Moon
16	Hungry Horse
17	Kila
18	Lake Blaine
19	Lakeside
20	Marion
21	Martin City
22	McGregor Lake
23	Mountain View
24	Olney
25	Somers
26	West Glacier

Exhibit No. of Public Sewer Maps

27	Whitefish
28	Columbia Falls
29	Big Fork
30	Columbia Heights
31	Coram
32	Essex
33	Half Moon
34	Hungry Horse
35	Kila
36	Lake Blaine
37	Lakeside
38	Marion
39	Martin City
40	McGregor Lake
41	Mountain View
42	Olney
43	Somers
44	West Glacier

SECTION I - INTRODUCTION

OBJECTIVES

Planning is the means of preparing for an orderly future. It is a process of looking ahead and considering all aspects of future growth with intelligent forethought, in order to formulate and promote the physical growth and development of an area in harmony with its social and economic needs.

The basic objectives of the county-wide water and sewer plan for Flathead County are:

1. To facilitate the preparation of such plans by local public bodies and similar agencies which do not have funds available for the immediate undertaking of such a plan.
2. To promote efficient and orderly development of rural communities.
3. To provide the information necessary to avoid overlapping, duplication, underdesign, or overdesign of community water and sewer facilities that may be constructed in the area covered by the plan.

The plan will include the entire county except the Kalispell-Evergreen urban complex and areas located within the boundaries of Glacier National Park.

This plan must be reviewed and revised from time to time to meet the changes in our ever-expanding society. Such regular review will assure the planning region that its plan will remain an up-to-date guide for orderly development.

HISTORY

Flathead County was first settled by fur traders, trappers and missionaries in the period before the Civil War. Following the Civil War, minor "gold rushes" in Lincoln County sparked settlement and brought ranchers and stockmen to the area. In 1887 T. J. Demers founded Demersville on the banks of the Flathead River at the end terminus of steamboat travel on the river. By 1890 there were an estimated 3,000 people residing in the upper Flathead Valley, the area which now generally comprises Flathead County. On January 1, 1892, the first Great Northern train steamed into Kalispell and brought an end to both the steamboat business on the Flathead River and the townsite of Demersville. With the advent of the railroad, all government and business centered in Kalispell which was incorporated in 1892. Flathead County was created February 8, 1893 from a portion of Missoula County. On May 11, 1910, Glacier National Park was established by Congress, with the bulk of its land area coming from Flathead County.

The railroad opened the trade doors for Flathead County by providing reasonable freight rates to eastern markets. Farming developed in logged-over areas and the lumber business boomed as transportation developed. Little change occurred in the economy (except seasonal and economic trends) until Hungry Horse Dam was constructed during the early 1950's. This marked a trend towards more industrialization, with the Anaconda Aluminum Company's plant being the first major producer to locate in the area. Other small industries now exist in the valley, with most of them oriented to

recreational or timber user products. Improved airport facilities in Flathead County will make it possible for small sophisticated businesses to thrive in an area removed from the large metropolitan centers.

Since its original settlement by the pioneers, agriculture and timber have predominated in the economic base of Flathead County. In general, the county history follows that of active agricultural expansion and the subsequent growth of trade centers to provide goods and services basic to these agricultural needs. The future of the county will be in the fields of recreation and industry. These growth areas accentuate the need of a county-wide plan for development of water facilities to meet the growing demands, and sewerage improvements to prevent contamination of the streams, lakes and ground water.

PHYSIOGRAPHY

Flathead County lies within the northern Rocky Mountain physiographic province, in northwestern Montana, and is bordered on the north by Canada. The mountain ranges are separated by intermountain valleys and are drained by the Flathead River and its tributaries. The rivers generally flow from north to south except for the Swan and the South Fork of the Flathead. Both these rivers flow north until joining the Flathead River or until emptying into Flathead Lake.

Tillable areas in the county are generally limited to the valley areas. The Flathead Valley consists of (1) nearly level alluvial lands, bottom lands and low terraces along the Flathead, Whitefish and Stillwater Rivers, (2) high, fairly smooth, lacustrine and glacial stream laid terraces or benches,

(3) morainic hills and ridges, and (4) sloping outwash fans and aprons extending from the adjacent mountains.

Logging, clearing and forest fires have greatly changed the vegetation in Flathead County since it was first settled in the late 1800's. Only scattered stands of virgin timber remain and second-growth forest now replaces much of the original cover. The better soil groups on the valley floor were converted to farm land following the original logging operation. Forests encircle the main valley and extend up the tributary valleys. Indigenous tree species are ponderosa pine, western larch, Douglas fir, lodgepole pine, mixed conifers and hardwoods. Hardwoods are of little commercial value, being limited to flood plain stands of willow, birch, alder and cottonwood.

CLIMATOLOGY

Flathead County, with its eastern boundary coinciding with the Continental Divide, is one of Montana's largest counties. With topography ranging from extremely mountainous to the broad Flathead Valley, wide variance in climate in Flathead County can be attributed to the influences of the topographic features. High mountains to the east form an effective barrier to many severe winter cold waves that move down over sections east of the Rockies from Alberta, Canada. The mountains east of Flathead Valley rise abruptly 4,500 feet above the valley floor. Their high elevation, with snow remaining on their crest until late spring, assures frequent and beneficial rains by cooling of the moist air moving from the west.

In addition to Flathead Lake, the valley contains four smaller lakes, three rivers and numerous streams and sloughs. Until late in the winter when a

large portion of the lakes and sloughs become frozen over, this water surface tends to limit temperature extremes. This effect is most noticeable in the southern end of the valley where Flathead Lake seldom freezes over. There is generally more moisture on the east side than on the west side of the valley, because, as the prevailing moist air moves from the west and southwest, it is lifted and cooled as it passes over the mountains.

Starting in March and lasting through September, the prevailing wind at Flathead County Airport between 11 A.M. and 7 P.M. is from the southeast. This wind blows off Flathead Lake and is caused by the land surface heating more in the daytime than the water surface of the lake. There are of course many times when the wind during this period is not from the southeast. Other effects such as cloudiness, frontal passages, etc. may cause the wind to be from another direction. The year-round prevailing wind direction is from the west at Kalispell and from the south at the Flathead County Airport.

During the winter, when a cold wave moves down the east side of the Continental Divide, cold air comes through the Divide into Flathead Valley. As this cold air moves down the valley, it spreads out, decreases in wind velocity and mixes with the warmer air of the valley. Unless the cold strong winds persist for three or four days, the southern part of the valley remains relatively mild. Because of the influence of Flathead Lake and mountains to the west, this wind is always much stronger in the northeast end of the valley than any other place in the valley. In the northwest corner, in the vicinity of Whitefish, and in the southeast part of the valley, there is rarely much wind from this type of storm.

The table on the following page shows the selected temperature and precipitation data for Flathead County.

It is interesting to note the difference in the average yearly precipitation between the recording stations in the valley, such as 15.17 inches per year in Kalispell compared with an average of 38.29 inches at Summit on the Marias Pass. Precipitation in the higher mountainous areas reaches well over 100 inches per year.

TABLE NO. 1

TEMPERATURE					PRECIPITATION				
Station	Years of Record	Highest of Record & Year	Lowest of Record & Year	Mean June July Annual	Yearly Average	% In Growing Season	Wettest Amt. & Year	Driest Amt. & Year	
Kalispell	1899-1966	+105 (61)	-29 (60)	21.3 65.4 43.1	15.17	53	20.91 (48)	10.42 (44)	
West Glacier	1937-66	+ 98 (66)	-37 (37)	20.6 63.5 42.1	29.11	42	41.38 (64)	18.59 (44)	
Summit	1937-66	+ 96 (61)	-55 (59)	15.3 56.7 35.9	38.29	40	55.51 (53)	25.30 (39)	
Polebridge	1934-66	+101 (61)	-46 (57)	17.0 61.0 39.3	22.32	41	33.21 (51)	13.07 (52)	
Creston	1949-63	+100 (61)	-40 (50)	20.6 64.2 43.2	18.55	53	26.52 (51)	11.43 (52)	
Hungry Horse Dam	1948-63	+102 (60)	-40 (50)	19.5 64.8 42.5	31.30	42	40.99 (59)	16.72 (52)	
Pleasant Valley	1923-63	+102 (61)	-51 (44)	19.5 60.1 40.1	18.84	42	29.18 (33)	10.39 (31)	

SECTION II - POPULATION CHARACTERISTICS

INTRODUCTION

Population trends are valuable indications of adjustments to changing social and economic conditions. People move for many reasons, but generally social or economic pressures dictate or stimulate these migrations.

Studies of population trends for areas the size of Flathead County require evaluation of many diverse factors. Statistical comparison of historical data and current population information permits the intelligent prediction of future trends and behavioral patterns in population movements. The analysis of these trends and patterns make possible a realistic projection of future growth and/or possible stability of an area.

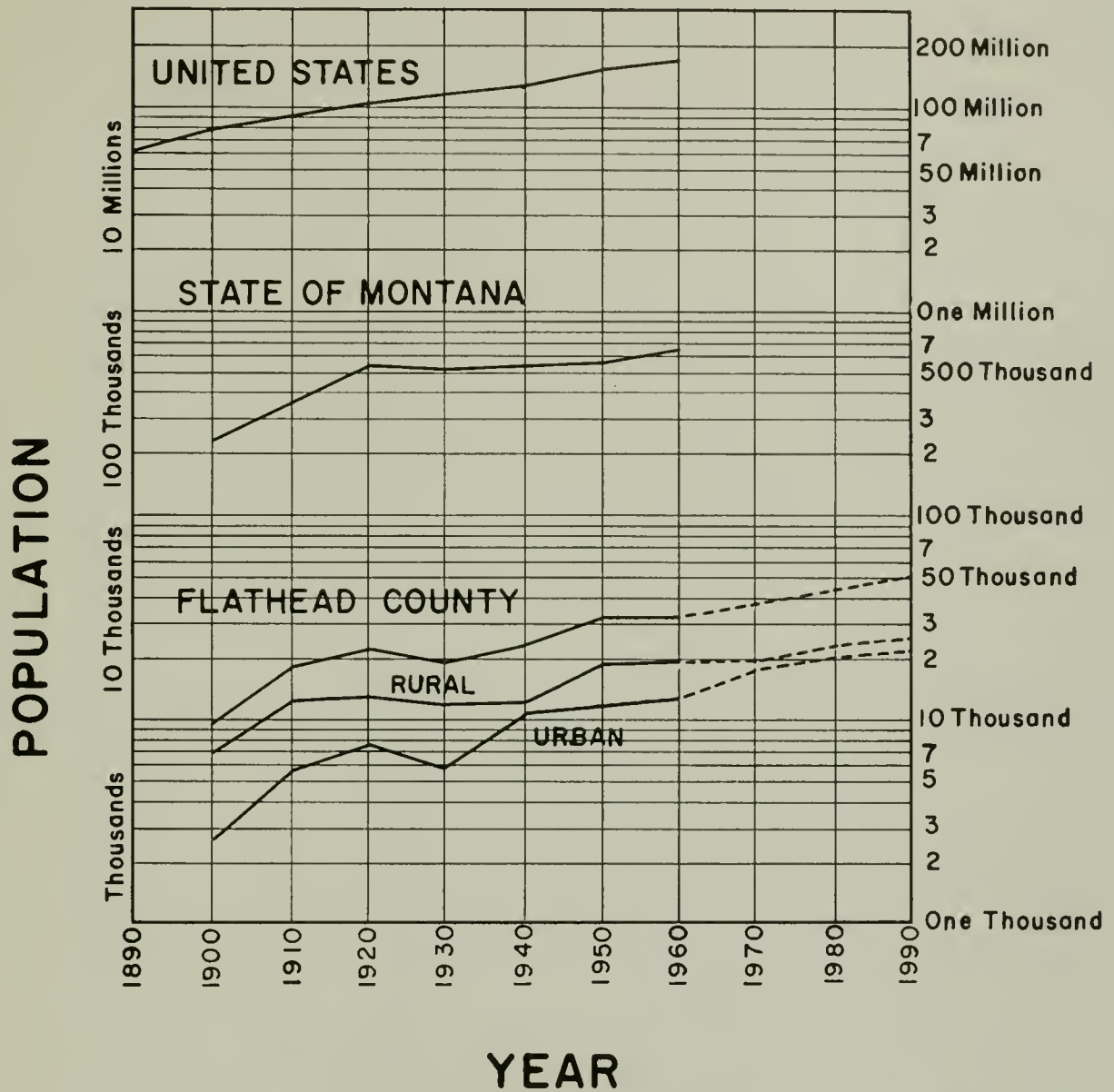
Population trends exhibited by Flathead County generally are true of rural North America. The county has been experiencing an off-farm migration which is characteristic of rural areas.

The trend of farm consolidation will continue in Flathead County and nationally as well. However, in recent years the county has shown an increase in the rural population because of the ever increasing utilization of the recreational areas for homesites. This trend will be a major factor in the county's future need for water and sewer facilities in the rural areas.

OVERALL CHANGE

As shown in Figure 1, the population of the United States increased 18.5 percent between 1950 and 1960, while the population of Montana increased 14.2 percent, and Flathead County increased 4.7 percent. Figure 1 also shows the population trends in the categories of rural and urban.

POPULATION TRENDS



NOTE: Population of county residing in incorporated places of population greater than 2,500 is classified as urban.

FIGURE NO. 1

The growth rate of Flathead County from 1960 to 1990 has been projected at the rate of 15 percent for each ten year interval. Farm units will continue the national trend towards a decline in number and increase in size during this era. Rural/non-farm habitants will increase sharply occasioned by the migrants from out of state urban population areas, seeking clean air and clean water.

Table No. 2 shows the births, deaths and natural increases in Flathead County from 1950 through 1967. The natural increase hit a peak in 1957 and has been decreasing for the past ten years. This decrease in the rate of natural increase is due to a trend toward a lower birth rate. National publicity concerning the population explosion, coupled with the improved and accepted methods of birth control are the primary cause of the lower birth rate.

TABLE NO. 2

<u>Year</u>	<u>Births</u>	<u>Deaths</u>	<u>Natural Increases</u>
1950	874	291	583
1951	955	336	619
1952	900	322	578
1953	847	298	549
1954	902	309	593
1955	981	333	648
1956	931	321	610
1957	980	328	652
1958	796	322	474
1959	859	342	517
1960	854	336	518
1961	779	323	456
1962	791	314	477
1963	751	330	421
1964	758	390	368
1965	796	375	421
1966	678	391	287
1967	657	333	324

The following table has been prepared to illustrate the history of urban and rural population along with our projections through 1990.

TABLE NO. 3

RURAL-URBAN POPULATION PREDICTIONS

	<u>1940</u>	<u>1950</u>	<u>1960</u>	<u>1970</u>	<u>1980</u>	<u>1990</u>
Kalispell	8,245	9,737	10,151	11,700	13,500	15,500
Whitefish	2,602	3,268	2,965	3,300	3,700	4,200
Columbia Falls	<u>(637)</u>	<u>(1,232)</u>	<u>(2,132)</u>	<u>2,700</u>	<u>3,300</u>	<u>4,000</u>
Total Urban	10,847	13,005	13,116	17,700	20,500	23,700
Rural/Farm	NA	5,324	3,659	3,300	3,000	2,900
Rural/Non-farm	<u>NA</u>	<u>13,166</u>	<u>16,190</u>	<u>16,500</u>	<u>20,000</u>	<u>24,000</u>
Total County	24,271	31,495	32,965	37,500	43,500	50,600

RURAL-URBAN RELATIONSHIP

Since the population of Columbia Falls in 1960 was less than 2,500, the U.S. Census classified the area as rural/non-farm. We are predicting that by 1970 there will be over 2,500 people and we are therefore projecting the population in the urban classification. Because of the expansion program of the Anaconda Aluminum Company's plant at Columbia Falls, we have predicted a higher rate of population increase for Columbia Falls than the average for the entire county. Since the U.S. Census considers only those people within the city limits to be urban, the actual population increase for Kalispell, Whitefish and Columbia Falls will depend upon annexation policies of these cities. The tremendous appeal of the suburban living within the county will continue to stimulate the growth in the rural/non-farm population.

We have projected the rural/non-farm growth rate to be somewhat higher than the county-wide average. Such factors as the increased size of the individual farming units, the technological advances, and the transfer of farm land to residential and recreational uses, will result in the continued decrease in the rural/farm population. However, this rate of decrease will become less in the later years, as the optimum point is reached.

AGE-SEX DISTRIBUTION

The age-sex distribution for Flathead County and the change in age group classes between 1950 and 1960 is shown in Table No. 4.

TABLE NO. 4

<u>Age Groups</u>	1950		1960	
	<u>Male</u>	<u>Female</u>	<u>Male</u>	<u>Female</u>
0-5	1,774	1,817	1,877	1,907
5-14	2,909	2,733	3,575	3,651
15-24	1,973	1,979	1,876	1,955
25-34	2,350	2,409	1,746	1,826
35-44	2,357	2,068	2,131	2,220
45-54	1,794	1,486	1,894	1,787
55-64	1,776	1,323	1,408	1,353
65 & Over	<u>1,608</u>	<u>1,139</u>	<u>2,016</u>	<u>1,743</u>
TOTALS	16,541	14,954	16,523	16,442

The age composition of Flathead County is similar to most other Montana counties in that the 20-40 age group has left to seek training, education

and jobs elsewhere. It is expected that the opening of the Flathead Valley Community College will help reverse this loss. The college currently enrolls over 600 students, expects 840 next fall, 1,045 in five years, 1,300 in ten years, and 1,740 in twenty years. They also anticipate the construction of a campus within five to seven years.

SIZE OF FAMILIES

There are 8,013 married couples in Flathead County, of which 3,317 have children under 18 in their household.

TABLE NO. 5

SIZE OF FAMILIES - FLATHEAD COUNTY, MONTANA *

Married Couples	8,013
With Own Household	7,896
With Own Children Under 6	2,538
With Own Children Under 18	4,695
With Husband Under 45	3,844
Families	8,584
Husband-Wife Families	7,896
With Own Children Under 6	2,601
With Own Children Under 18	4,928
Unrelated Individuals	1,876
Persons Under 18 Years Old	12,751
Living with Both Parents	11,686

*Source: U.S. Census of Population 1960

In Flathead County the average size of a family with children is 4.6 individuals. Rural families total 1,088 and control 14.3 percent of the land area in Flathead County. The average population density of Flathead County is about 6.4 per square mile, an increase of 1.7 people/sq. mile since 1940.

SUMMARY

The population changes of Flathead County may be characterized as follows:

1. An increasing population since 1900.
2. A rather stagnant growth period after World War II which now shows signs of accelerating.
3. Declining rural/farm population, but a rural/non-farm population that is expanding faster than the average growth rate.
4. A high out-migration of people in the 20-40 age group.
5. A projected population growth at a rate of 15 percent for each 10 year period.

The projections of population growth for the county and the implications that follow are based on the assumption that the economic and social trends will continue basically unchanged except in rate of growth. Any change in county population trends will naturally alter the type and rate of county developments.

With the rising and expanding economy, all phases of the business and labor market find their services in demand. Only those skills and businesses phasing out because of technological advances have difficulty under these economic conditions.

The continued population changes force attention of the citizens to a variety of public and private group decisions--about taxation, school reorganization, reapportionment, and government mergers. Constant evaluation of these needs, as well as basic water and sewer problems, will continue to demand the attention of planners, engineers, local citizenry and governmental units.

SECTION III - AREA ECONOMIC CONDITIONS

GENERAL ANALYSIS

The economic base of an area consists of those activities which provide the basic employment and income on which the rest of the local economy depends. The evaluation of the existing economic situation in Flathead County will give an indication of the county's growth in economic opportunities. The economy of an area can be divided into three segments: (1) export activity, (2) support activity, and (3) domestic activity. Export activity is the prime mover of the economy and depends upon the demands originating outside of the area for local goods and services. In Flathead County agriculture and manufacturing are major export activities. Transportation and services as they relate to tourist trade must also be considered an export activity. Support employment exists due to the demands created by the export activity, such as farm supplies. Domestic employment provides goods and services for consumption by local residents.

Since export markets are the prime movers of the local economy, when employment serving the export market rises or falls, employment serving the local market will move in the same direction. Comparison of employment and population data for Flathead County, as shown in Table No. 6, indicates a substantial reduction in the agricultural employment and a substantial increase in the manufacturing employment. The increase in the manufacturing employment is primarily related to the activity at the Anaconda Aluminum Company's plant at Columbia Falls. The employment in agriculture declined due to advanced technology and consolidation of farming units. Since farm production did not decline during this period, there was an increase in the productivity per worker.

TABLE NO. 6

EMPLOYMENT DATA - FLATHEAD COUNTY, MONTANA

	<u>1950</u>	<u>1960</u>	<u>1967</u>
Agriculture	1,359	832	772
Forestry & Fisheries	85	163	197
Mining	26	8	17
Construction	1,440	480	1,670
Manufacturing	1,234	2,043	2,930
Transportation & Utilities	1,552	1,107	1,078
Trade	2,091	2,469	2,561
Services & Finance	1,934	2,587	2,662
Public Administration	394	510	689
Not reported	<u>198</u>	<u>174</u>	<u>201</u>
Total	10,313	10,373	12,777
Total Population	31,495	32,965	36,500 (Est.)

LABOR FORCE

Of the 22,492 residents in Flathead County who are 14 years and older, 53.5 percent are in the labor force. In 1960 nearly 7.4 percent of the labor force was reported to be unemployed. Current unemployment is considerably lower than this figure. The employment data shows that between 1960 and 1967 the total number of employed increased from 10,373 to 12,777. The largest single increase came in the construction category, which now employs 1,200 more people than in 1960.

TABLE NO. 7

FLATHEAD COUNTY LABOR FORCE

	1950		1960	
	<u>Male</u>	<u>Female</u>	<u>Male</u>	<u>Female</u>
No. of residents 14 years or over	12,086	10,659	11,323	11,169
Labor force	9,637	2,324	8,540	3,578
Employed	8,197	2,116	7,211	3,162
Unemployed	1,432	206	1,248	416
Not in Force	2,449	8,335	2,783	7,591
Inmate of Institution	94	19	166	82
Enrolled in School	NA	NA	808	765
Other, under 65 years old	1,786	8,207	491	5,359
Other, 65 years & over	569	109	1,318	1,385

From 1950 to 1960 the number of women in the labor force increased by about 54 percent. In 1950 the women accounted for approximately 20 percent of the labor force, whereas, in 1960 they represented approximately 30 percent of the total labor force. The increasing number of women in the labor force is partly responsible for increasing the average family incomes, since the married women provide a second income for the family when they take a job. The increase in the number of women in the labor force is a trend which is not peculiar to Flathead County. It is seen throughout the nation and is expected to continue.

AREA INCOME

Income as a measure of economic progress may be studied by either the total or aggregate income of the area or by the family unit income. The aggregate

income for Flathead County increased from 73.6 million in 1960 to 97.7 million in 1967, or about 33 percent in seven years. The median family income increased from \$3,250 in 1950 to \$5,392 in 1960, an increase of 66 percent in ten years. Of course a sizeable portion of this increase can be attributed to the inflationary spiral that was prevalent throughout the period. However, there are several factors which have been and will continue to increase the median family income. Among these is the increased productivity of the farm worker along with the increased size of the individual farm. As previously mentioned, the increased percentage of the women that are working is a contributing factor. Another important consideration in Flathead County is the increase in manufacturing employment, 137 percent in the last seventeen years. This type of employment will have a favorable effect on the median family income. The following table indicates that although the retail sales have been increasing substantially during recent years, the wholesale sales have been holding fairly constant.

TABLE NO. 8

COUNTY SALES IN THOUSANDS OF DOLLARS

	<u>1954</u>	<u>1963</u>	<u>1966</u>
Wholesale	25,045	25,478	NA
Retail	42,919	49,657	54,556
Selecline Services	4,071	5,949	NA

FARM INCOME

The following table shows the farm income and the operation statistics for the years 1954, 1959 and 1964.

TABLE NO. 9

TREND IN FARM INCOME AND OPERATION

	<u>1954</u>	<u>1959</u>	<u>1964</u>
Total Acres of Land in Flathead County	3,289,600	3,289,600	3,289,600
Acres in Farms	431,130	507,227	470,711
Percentile in Farms	13.1	15.4	14.3
Number of Farms	1,434	1,184	1,088
Average Size	300.6	428.4	432.6
Value of all Farm Products Sold	\$4,856,578	\$5,772,836	\$6,026,617
Average per Farm	\$3,420	\$4,736	\$5,539
Value of All Crops Sold	\$2,862,070	\$2,486,786	\$2,603,265
Value of All Livestock & Livestock Products Sold	\$1,994,508	\$3,286,050	\$3,353,301
Income for all Members from Sources Other Than Farm Operated	NA	NA	\$4,418,531
Regular Hired Workers (Employed 150 days or more)	114	91	140
Farm Operators Residing on Farms Operated	1,357	1,073	987
Farm Operators Not Residing on Farms Operated	49	61	75
Farm Operators Working Off Farms	906	692	648
Farm Operators Working Off Farms (100 days or more)	676	518	513

Although the percentage of land that is used for farming has not changed appreciably in the last ten years, the number of farms has decreased approximately

24 percent. During this same period the average size of the farm increased by nearly 44 percent. A similar relationship can be found by comparing the value of all farm products, which increased by 24 percent, with the average per farm, which increased 62 percent. It is also interesting to note that about 42 percent of the total income for farm members was from sources other than from farm operation. The number of farmers working off the farm dropped 29 percent which corresponded closely with the percentage of decrease in the number of farms in operation. We feel that with continued farm enlargements, through the consolidation of smaller holdings, there will be a smaller number of farmers working off the farm. This is because farmers operating larger units are more fully employed. On the other hand, as a farmer tries to operate the smaller farm unit, he seeks supplementary work to provide additional income.

Between 1954 and 1959 there was a marked change in the type of farm products being sold. In 1954 livestock and livestock products accounted for 41 percent of the total value of all farm products sold. By 1959 this percentage had increased to 57, and remained fairly constant the following five years.

LOCAL GOVERNMENT

The Revised Codes of Montana (1947) set forth the authority for a county-wide governmental agency. The governing body is the Board of County Commissioners, an elected body, whose duties and responsibilities are established by the codes. Not only do the codes limit what the County can do, but they spell out the means by which revenue is to be raised to perform specific functions.

The total assessed value in 1967, of all property in Flathead County, was \$137,334,050; the taxable value was \$39,726,568; and the total County levy was .026935. The County levy is for the following County funds:

General	.01507
Bridge	.00191
Poor	.00594
Fair	.000957
Airport	.000412
Noxious Weed	.000704
Extension	.000531
Class & Appraisal	.001
Bond Interest	<u>.000411</u>
Total Flathead Cty. Levies	.026935

These same codes allow for the incorporation of cities or towns as first, second, or third class cities or as towns depending upon the population within the corporate limits. An elected mayor and city council is the governing body except for those cities operating under statutes allowing city manager form of government. Although the City Council is empowered to enact laws, their sources of revenue are also limited by the Codes.

The assessed value, taxable value and levy for each of the incorporated cities within the county is as follows:

<u>Name</u>	<u>Assessed Value</u>	<u>Taxable Value</u>	<u>County Levies</u>
City of Kalispell	33,961,670	9,426,319	.042328
City of Whitefish	6,911,148	1,902,053	.0555
City of Columbia Falls	6,673,482	1,855,197	.04825

State statutes limit the amount of indebtedness that a municipality may incur. The total indebtedness is limited to 5% of the cities' assessed value plus an additional 10% for water or sewer improvements. The indebtedness of the two cities included in this plan is as follows:

Columbia Falls

General obligation bonds (water improvements)	\$254,000.00
Revenue bonds (water improvements)	\$ 500.00
Revenue bonds (authorized for water improvements but not sold)	\$ 65,000.00

Whitefish

General obligation bonds (City Hall)	\$ 90,000.00
Revenue bonds (water improvements)	\$115,000.00
Revenue bonds (sewer improvements)	\$145,000.00

There is no limit to the amount of bonds than can be sold to finance special improvement districts that are properly credited.

City-County planning boards can be formed through joint efforts of the Board of County Commissioners and a City Council. These planning boards are created to serve a specific area that can extend up to 4.5 miles beyond the City Limits. Planning boards have been created for Columbia Falls, Kalispell and Whitefish, and are operating within the planning limits shown on exhibit No. 1.

School Districts are governed by an elected board of trustees. The sources of revenue for operation of these districts is also limited by Montana Codes. The following table shows the assessed value, taxable value and levy for the school districts in Flathead County.

<u>District</u>	<u>District Levy</u>	<u>Taxable Value</u>
West Valley	.019110	498,622
Deer Park	.010174	196,649
Fair-Mont-Egan	.020226	476,664
Swan River	.002288	330,190
Kalispell	.041206	11,888,269
Columbia Falls	.025506	11,704,662
Bad Rock	.025018	219,432
LaSalle	.024385	182,526

<u>District</u>	<u>District Levy</u>	<u>Taxable Value</u>
Valentine	.024385	473,050
Half Moon	.024385	77,461
Creston	.006281	300,266
Cayuse Prairie	.017874	207,891
Demersville	.015809	321,622
Helena Flats	.007464	296,235
Pine Grove	.015756	227,308
Kila	.018665	201,218
Batavia	.015688	148,738
Pleasant Valley	.004409	357,233
Hodgson	.004080	215,314
Somers	.054190	746,508
Brocken	.051340	159,849
Lakeside	.003784	984,237
Echo	.007499	101,691
Ferndale	.029982	73,284
Big Fork	.016390	1,093,856
Boorman	.009132	75,518
Battle Butte	.020314	194,785
Forest Park	.035392	123,029
Whitefish	.031440	4,605,591
Lake Blaine	.006827	154,698
Rouselle	.024013	160,306
Evergreen	.042865	1,658,745
Marion	.030290	627,343
Olney	.012463	384,675
Kuhna	.012463	81,627
Mountain Brook	.032207	57,106
Birch Grove	.030428	120,370
Flathead High School	.028728	20,319,844
Whitefish High School	.023659	4,990,266
Columbia Falls High School	.017337	12,657,131
Bigfork High School	.028227	1,759,327

In addition to the above levies there is a total State levy of .00825, a total General School levy of .051231, a total Sheep levy of .012 and a total Livestock levy of .011. There are also several levies for specific purposes such as fire district, mosquito control, planning, etc.

SUMMARY

The present economy of Flathead County must be considered very healthy. All the barometers are on the plus side; employment up 23 percent, median family income up 66 percent, aggregate income up 33 percent, retail sales up 27 percent, value of farm products up 24 percent. The diversification of the economy can only lead to favorable predictions for continued economic growth. Employment in construction, manufacturing, trade, services and finance have been strong in recent years. The recreation facilities within the county are constantly being expanded and will have an ever increasing influence on the economy.

SECTION IV - HOUSING

The characteristics of housing units in Flathead County have been obtained from the statistics prepared by the U.S. Bureau of Census. Statistical analysis of the rural/farm dwelling units are tabulated in Table No. 10 for both 1950 and 1960. This table also includes the same statistical analysis for the rural/non-farm dwelling units for the year 1960. These statistics have been prepared both as to the total number of dwelling units and as to the percentage that each breakdown bears to the total within its category. The total number of dwelling units in Flathead County increased from 7,227 units in 1940 to a total of 12,510 dwelling units in 1960. During the same period the population within Flathead County increased from 24,271 to 32,965. In 1960 a total of 66 percent of the county population resided in rural areas. That same area had 61 percent of the dwelling units. As previously noted in the discussion on population, Section II, Characteristics, the Bureau of Census has classified those areas with a population of 2,500 or over as urban areas. Therefore, in 1960 Kalispell and Whitefish were the only urban areas within the county.

TABLE NO. 10

TENURE, CONDITION, PLUMBING FACILITIES, AND STRUCTURAL CHARACTERISTICS OF HOUSING UNITS

	<u>1950</u>	<u>1960</u>
Total dwelling units	10,808	12,510
Urban and non-farm dwelling units	9,114	11,425
Rural/non-farm dwelling units	NA	6,587
Rural/farm dwelling units	1,694	1,085

TABLE NO. 10 (Cont.)

TENURE AND COLOR	RURAL/FARM			RURAL/NON-FARM		
	1950	%	1960	%	1960	%
Total dwelling units	1,694	--	NA	--	6,587	---
All occupied units	1,532	--	1,085	--	4,633	---
Owner occupied	1,315	86	1,000	92	3,525	76
White	1,312	86	1,000	92	3,518	76
Non-white	3	--	-----	--	7	---
Renter occupied	216	14	85	8	1,108	24
White	216	14	85	8	1,108	24
Non-white	1	--	-----	--	-----	---
CONDITION AND PLUMBING						
All dwelling units	*1,694	--	#1,085	--	*6,587	---
Sound	1,407	83	823	76	5,020	76
With all plumbing facilities	603	36	730	67	4,143	63
Lacking only hot water	16	1	-----	--	27	---
Lacking other plumbing facilities	788	46	93	9	850	13
Deteriorating	-----	--	199	18	1,163	18
With all plumbing facilities	-----	--	117	11	671	10
Lacking only hot water	-----	--	-----	--	7	---
Lacking other plumbing facilities	-----	--	82	8	485	8
Dilapidated	212	13	63	6	404	6
Not reported	75	4	-----	--	-----	---
Renter Occupied	217	13	85	8	1,108	17
Sound	171	10	44	4	725	11
With all plumbing facilities	62	4	40	4	633	10
Lacking some or all facilities	109	6	4	--	92	1
Deteriorating	-----	--	29	3	302	5
With all plumbing facilities	-----	--	13	1	185	3
Lacking some or all facilities	-----	--	16	2	117	2
Dilapidated	28	2	12	1	81	1
Not reported	18	1	-----	--	-----	---
All dwelling units	1,694		1,085		6,587	
WATER SUPPLY						
Hot & cold piped running water, inside structure	786	46	932	86	5,239	80
Only cold piped running water, inside structure	280	17	71	6	436	7
Piped running water, outside structure	26	2	19	2	93	1

* Based on total dwelling units

Based on occupied dwelling units -25-

	RURAL/FARM				RURAL/NON-FARM	
	<u>1950</u>	<u>%</u>	<u>1960</u>	<u>%</u>	<u>1960</u>	<u>%</u>
No piped running water	573	33	63	6	819	12
Not reported	19	2	----	--	----	--
TOILET FACILITIES						
Flush toilet, inside structure, exclusive use	659	39	878	81	5,060	77
Flush toilet, inside structure, shared	1	--	----	--	32	--
Other toilet facilities (including privy)	920	54	207	19	1,495	23
No toilet	83	5	----	--	----	--
BATHING FACILITIES						
Installed bathtub or shower, exclusive use	694	41	889	82	4,982	76
Installed bathtub or shower, shared	1	--	----	--	36	--
No bathtub or shower	968	57	196	18	1,569	24
Not reported	31	2	----	--	----	--
SOURCE OF WATER						
Public system or private company	----	--	14	1	2,578	39
Individual well	----	--	855	77	2,575	39
Other	----	--	247	22	1,403	22
SEWAGE DISPOSAL						
Public sewer	----	--	----	--	213	3
Septic tank or cesspool	----	--	966	87	5,133	79
Other or none	----	--	150	13	1,210	18
ROOMS						
1 room	62	4	8	1	349	5
2 rooms	118	7	28	3	570	9
3 rooms	201	12	92	9	1,210	18
4 rooms	315	18	229	21	1,844	28
5 rooms	323	19	286	26	1,227	19
6 rooms	303	18	206	19	797	12
7 rooms	149	9	177	16	379	6
8 rooms or more	170	10	59	5	211	3
Not reported	53	3	----	--	----	--
Median:						
All units	----		5.1		----	
Owner	----		5.2		4.7	
Renter	----		----		4.1	

	RURAL/FARM				RURAL/NON-FARM	
	<u>1950</u>	<u>%</u>	<u>1960</u>	<u>%</u>	<u>1960</u>	<u>%</u>
YEAR STRUCTURE BUILT						
1955 to March, 1960	----	--	58	5	1,160	18
1950 to 1954	----	--	137	13	1,051	16
1940 to 1949	360	21	191	18	1,921	29
1930 to 1939	330	19	194	18	954	14
1929 or earlier	925	55	505	46	1,501	23
Not reported	79	5	----	--	----	--
HEATING EQUIPMENT						
Central heating, piped steam or hot water	15	1	18	2	----	--
Central heating, warm air furnace	330	19	401	37	----	--
Non-central heating, with flue	1,135	68	636	58	----	--
Non-central heating without flue	40	2	30	3	----	
Not reported	174	10	----	--	----	--

It is interesting to note that despite the tremendous improvement in plumbing facilities within the dwelling units, the number of units that were classified as "sound" decreased from 83 percent in 1950 to 76 percent in 1960. The average number of people per dwelling unit was 3.1 in 1940. This number decreased to 2.9 in 1950 and was 2.6 in 1960.

The above statistics point up the change in the water and sewer facilities serving the rural/farm dwelling units. Units with all plumbing facilities increased from 36 percent in 1950 to 67 percent in 1960, whereas those with hot and cold water inside the structure increased from 46 percent to 86 percent during this same period. Those with inside flush toilets increased from 39 percent to 81 percent.

Statistics concerning the source of water and the sewage disposal indicate that there has been a definite lag between the improvements within

the individual dwelling units and the installation of public water supply and sewage disposal facilities. In 1960 only 1 percent of rural/farm dwelling units had a public system or private company supplying water and only 39 percent of rural/non-farm had this type of water supply. At the same time none of the rural/farm dwellings and only 3 percent of the rural/non-farm dwellings had a public sewer. Since Columbia Falls has a public water system but does not have a public sewer system the percentage of rural/non-farm dwellings is considerably different for these two categories.

By and large, these dwellings were obtaining water from individual wells and disposing of their sewage wastes in septic tanks or cesspools. This, of course, is a most undesirable situation and is a problem that must be faced at this time, so that as the population of the county increases, the lakes, streams and ground water will not become contaminated from the septic tanks.

SECTION V - PUBLIC UTILITIES

The general location of the public utilities discussed in this section is shown on Exhibit No. 3, Public Utilities Map.

TRANSPORTATION

There are several airport facilities located in Flathead County. A field to serve small craft, located immediately south of Kalispell, has a 3,200 ft. stabilized turf runway. Whitefish has an airport with a 3,150 ft. stabilized turf runway, which also serves small aircraft. The U. S. Forest Service has a landing strip with a 3,000 ft. turf runway located upstream from Hungry Horse Reservoir on the Flathead River, another located approximately 17 miles south of the community of Summit along the middle fork of the Flathead River, with a 3,330 ft. runway, and another along the south fork of the Flathead River below Hungry Horse Reservoir, with a 3,175 ft. turf runway. A private airport, with a 3,100 ft. stabilized turf runway, is located north of Columbia Falls on the north fork of the Flathead River. The major airport of the county is the Flathead County Airport, which is located midway between Kalispell, Whitefish and Columbia Falls. This airport has three paved surface runways of 5,580 ft., 4,720 ft. and 4,660 ft. Plans are under way to extend one of the present runways to 8,000 ft. This runway would then be adequate for the DC-9 and Boeing 747 aircraft which are planned for the area by 1970. At the present time Air West Airlines is serving Flathead County, with flights to Spokane and Great Falls. Commute Air has been providing feeder line service since April, 1967. Service has recently been expanded with the addition of a Nord 262 aircraft with a

capacity of 26 passengers. The Flathead County Airport does not have a port of entry which is needed to handle the ever increasing number of flights from Canada.

The Great Northern Railroad serves Columbia Falls and Whitefish with main line service and has a branch line serving Kalispell. Direct service is provided to Spokane, Seattle, Tacoma to the west, and Great Falls, Minneapolis, St. Paul and Chicago to the east. A division point on the Great Northern Railroad is located in Whitefish. Trucking lines include six motor carriers that are serving Flathead County. Bus service for the county is provided by Inter-mountain Transportation Company, Brown Bus Lines and Great Northern.

NATURAL GAS

A 10 inch transmission line which is intertied with the Montana Power statewide transmission system brings gas into Flathead County. This transmission line is connected to the 16 inch transmission line between Cut Bank and the Canadian border. The line has been designed to serve anticipated expansion in the Flathead area. The Montana Power Company presently estimates that they are serving 60 - 70 percent of the residential customers. The company is vitally interested in expanding their distribution system within the limits of the economic feasibility.

ELECTRIC POWER

Power energy is being generated in two different locations in Flathead County; Hungry Horse Dam, operated by the Bureau of Reclamation and Big Fork Dam, operated by Pacific Power and Light. The Bonneville Power Administration markets the power and energy generated at Hungry Horse Dam. Hungry

Horse has a nameplate capacity of 285,000 kilowatts. Although the total capacity is available the year round for short periods, the project is not generating during the storage season from mid-April to mid-September. Since Hungry Horse is a storage reservoir, it is used to release water during periods of low stream flow in the winter months. The downstream power benefits from the release of Hungry Horse storage totals 843,000 kilowatts. Bonneville Power has 230,000 and 500,000 volt transmission lines in Flathead County. During periods of low generation in western Montana, power and energy can be brought in from projects along the Columbia River and others, to meet the firm area loads. Libby Dam, which is scheduled to go into complete operation in 1974, will add 420,000 kilowatts to the Bonneville Power transmission system. Bonneville Power is presently selling electricity to the Anaconda Aluminum Company at Columbia Falls. Bonneville also sells capacity without energy to the Pacific Power and Light Company in Flathead County. The amounts vary by month, but the largest amount is 10,000 kilowatts which is sold to the company during January to June. The Pacific Power and Light Company is serving the cities of Whitefish and Columbia Falls, along with the communities of Big Fork, Half Moon, Kila, Lakeside and Somers. The Flathead Electric Cooperative is serving the other communities within the county except Olney which is being served by the Lincoln Electric Cooperative.

SECTION VI - NATURAL RESOURCES

MINERALS

Flathead County contains a large variety of minerals such as copper, lead, zinc, gold, coal and many others. Mining activity within the county commenced about 1890. Although there have been many operations started since this time, they generally have not proven economically feasible, and were discontinued after a short period of time. An exception is the Hog Haven district, which lies 15 miles west of Flathead Lake, and produced a substantial amount of silver, gold and copper. These same metals are being produced in the Star Meadows district, northwest of Whitefish.

SAND AND GRAVEL

Heterogeneous mixtures of gravel and sand occur within Flathead County. Several companies are excavating gravel and sand for road construction and other purposes.

FISH AND GAME

The abundance of wild life throughout the county must be considered a natural resource. Flathead River with its many tributaries offers sport fishing with backgrounds of unexcelled mountain beauty. Hungry Horse Reservoir and Flathead Lake are the largest bodies of water within the county; however, there are numerous smaller lakes throughout the mountain areas. The county, like much of western Montana, is abundant with deer, black and grizzly bear. Some big-horned sheep inhabit the high lands of Flathead County and mountain goat herds await hunters in the lofty domain. Elk range over a large portion of the County, most frequently in the northern drainage areas. Game birds include the

ring-necked pheasants and a variety of grouse along with migratory birds , ducks and geese.

TIMBER

The Public Land Map (Exhibit No. 4) shows the location of the National Forests within the county. The principal commercial timber found there are western larch, spruce and Douglas fir. Other commercial species include Lodgepole pine, Ponderosa pine, White pine and Alpine fir. Flathead National Forest has a current inventory of about 8.4 billion board feet of timber. The presnet allowable cut is 127 million board feet which comes from cutting over 11,200 acreas annually. Flathead County contains about 1.8 million acres of commercial forest land of which 64 percent is on national forest land. There has also been a substantial yield of Christmas trees from this area. Portions of the Kootenai National Forest and the Lolo National Forest are located within the county.

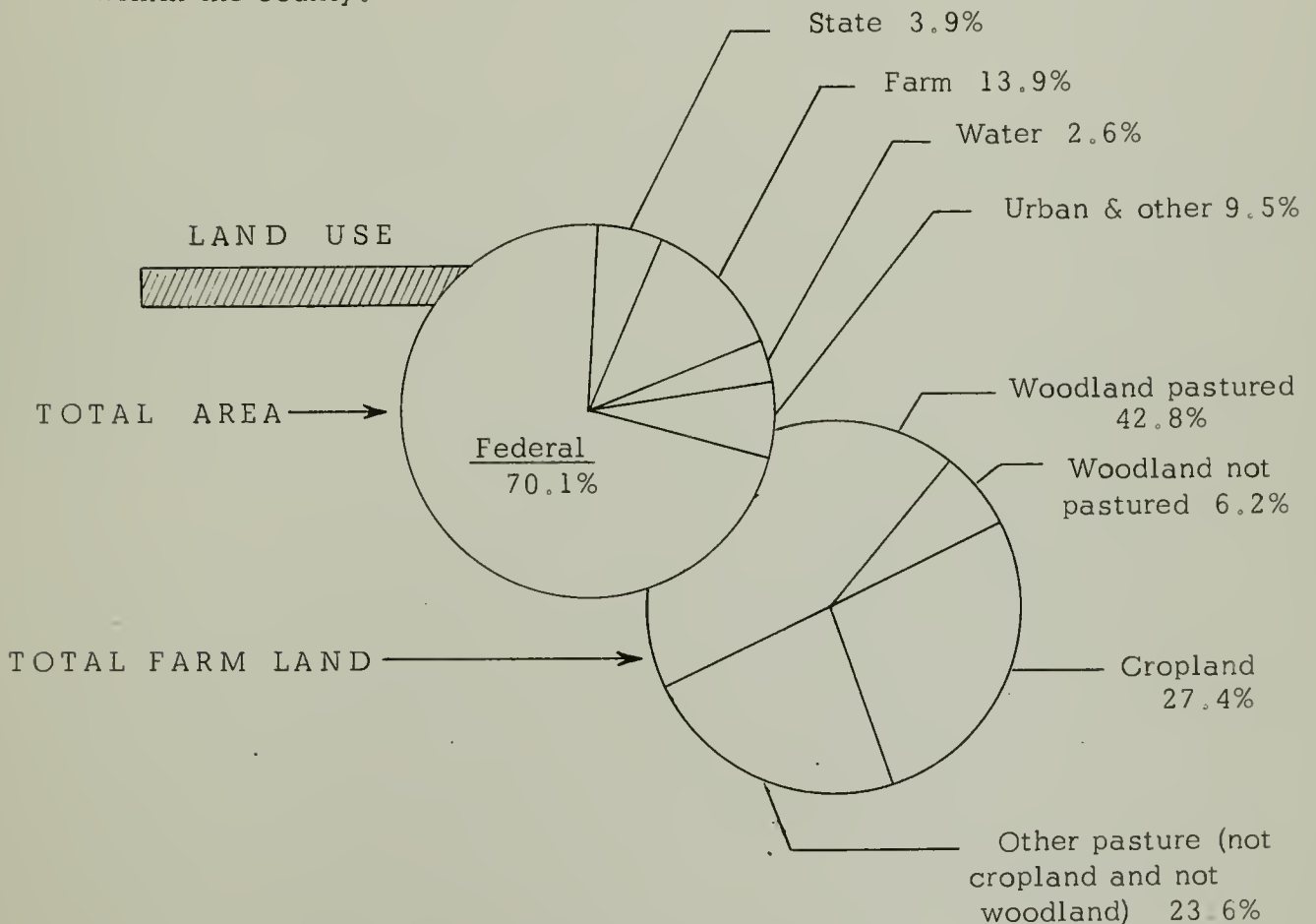
TOURISM

The recreational potential of the area is almost without limit. Such activities as boating, hunting, fishing, skiing, golfing, camping are readily available. The mountains, lakes, rivers and forest located in Glacier National Park and the National Forests attract and hold tourists in the county.

SECTION VII - LAND USE

GENERAL

The terrain of Flathead County is greatly diversified, ranging from sheer mountains through timbered valleys to the rich agricultural lowlands. Flathead County encloses a total area of 3,379,200 acres of which 3,289,600 acres are land and 89,600 acres are water. Nearly 90 percent of the county is forested and mountainous. The following illustration shows proportion of land use for specific purposes within the county based on the total area within the county. The chart for agricultural land use is based on the total farm land within the county.



PUBLIC LANDS

Glacier National Park contains 560,000 acres and the national forest lands comprise a total acreage of 1,778,795 acres. Most of Flathead National Forest and a small portion of the Kootenai and Lolo National Forests are located in Flathead County. These lands are managed by the forest rangers at Whitefish, Columbia Falls, Hungry Horse, Spotted Bear, Big Prairie and Big Fork for the Flathead National Forest, and at Raven and Murphy Lake for the Kootenai National Forest, and at Plains for the Lolo National Forest. A very large percentage, probably 75 percent, of Flathead County is classified as public domain.

AGRICULTURAL LANDS

Most of the county's 1,088 farms are located in the Flathead Valley. This valley is about 15 miles wide and 25 miles long, with a gradual slope from north to south. The largest river is the Flathead which drains into the Flathead Lake at the southern end of the county. Other important rivers include the Swan, Stillwater and Whitefish.

The farming area of Flathead County is confined to the floor of the Flathead Valley and relatively small foothill holdings. About 40 percent of the cropland lies in the 107 feet of altitude above the Flathead Lake; 47 percent is in the next 500 feet, and only about 13 percent is above 3,500 feet in altitude. The high productive valley is fringed at east, west and north by forest land.

The following table gives the trend in agricultural land use.

TABLE NO. 11

	<u>1954</u>	<u>1959</u>	<u>1964</u>
Total acres of land in Flathead County	3,289,600	3,289,600	3,289,600
Acres in farms	431,130	507,227	470,711
Percentile in farms	13.1	15.4	14.3
Number of farms	1,434	1,184	1,088
Average Size	300.6	428.4	432.6

Between 1954 and 1964 the average size of a farm increased from 300.6 acres to 432.6 acres. During this period the percent of land in farms varied from about 13 to 15 percent of the total land area.

The 1964 U. S. Census of Agriculture lists 17,588 acres of irrigated land in farms. The Water Resources Survey indicates that there are presently 27,726 acres of irrigated land in Flathead County. The location of this irrigated land is tabulated with respect to the various drainage courses in the following table.

TABLE NO. 12

IRRIGATED LAND

<u>Stream Including Tributaries</u>	<u>Acres</u>
Kootenai River	2,586.00
Whitefish River	2,458.00
Stillwater River	11,161.00
Ashley Creek	6,980.58

TABLE NO. 12 (Cont.)

<u>Stream Including Tributaries</u>	<u>Acres</u>
Swan River	125.00
Little Bitterroot	656.00
Thompson River	441.00
Flathead River	24,698.58
Grand Total, Flathead County	27,725.58

The Land Use Map (Exhibit No. 5) indicates the predominant areas being used for residential, commercial, industrial, agricultural, forest and recreational purposes.

SOILS

The use of any parcel of land is dependent upon the type of soil which that parcel of land has. Whether the proposed use be agriculture, construction of improvements such as residential homes or commercial buildings, or the installation of paving improvements or water and sewer lines, the type of soil is a factor in the proper utilization of this land. The Soil Association Map for the upper Flathead valley area, Montana (Exhibit No. 6), has been included in this report. This map was prepared from the Soil Survey for Upper Flathead Valley Area, Montana, by the U. S. Department of Agriculture, Soil Conservation Service. As one travels from place to place in the Flathead valley area, it is fairly easy to see the differences in shape, length, depth and speed of streams; in the width of the bordering valleys,

in the kind of plants and in the type of agriculture. Less noticeable are the differences in the patterns of soils. The soil association map was prepared by drawing lines around the different patterns of soil. This map is useful to compare different parts of the upper Flathead valley area, and to locate large areas suitable for some particular kind of agriculture or other broad use.

The Soil Association Map is indexed as to the various soil associations, each of which is discussed as follows.

Whitefish association

The largest part of this association is in the northwestern part of the Upper Flathead Valley Area. Smaller parts are mainly around the edges of the valley where the land rises to the mountains. Most of the slopes in this association range from moderate to very steep. Some small areas are nearly level.

The Whitefish soils cover most of this association. They are deep, well-drained, light-gray, loamy soils that have developed in till under a heavy forest cover.

Most of this association is in second-growth forest. Some small areas have been cleared and are farmed. Other clearings are used for growing Christmas trees.

Waits association

This association is in the southeastern part of the Upper Flathead Valley Area. It contains level to gently sloping foot slopes that grade eastward to the mountains.

This association consists mostly of Watts soils but has small areas of Krause soils. Waits soils are deep, well-drained, pale-brown, mostly cobbly

and stony loams that have developed in till and outwash material, under a heavy forest cover.

Most of this association is in second-growth timber. A few acres are used for the production of Christmas trees. The smoother areas have been cleared and are used mainly for pasture and hay. Most farms in this association are small and have only enough cleared land for pasture and hay for a few cows and for a garden and fruit trees. Farm income is supplemented by part-time work in the lumber industry.

Krause association

This association is in the southeastern part of the Upper Flathead Valley Area. It is a rough area with steep slopes but contains a few small spots of more level land. Small kettle-hole lakes, of which Echo Lake is the largest, are scattered throughout this association.

In this association are moderately deep, stony and gravelly, pale-brown, loamy soils that have developed in till and outwash material under a heavy forest cover. These soils are moderately to excessively drained. The subsoils are moderately coarse to coarse. The Krause soils cover most of the area, but small acreages of the Waits soils also occur.

This association is mainly in second-growth forest; very little of it has been cleared.

Selle-McCaffery association

This association is in the southeastern part of the Upper Flathead Valley Area. The topography is gently rolling; slopes range from nearly level to moderately steep.

This association consists of deep, excessively drained, pale-brown, sandy soils that have developed in sandy outwash material under a heavy forest. The Selle and McCaffery soils cover most of the area.

Most of the trees have been cleared. Grasses have been planted for pasture and hay. Small grain and berries are also grown.

Half Moon-Depew-Stryker association

Most of this association is in the northern part of the Upper Flathead Valley Area. Small acreages of it are scattered in the eastern part. This association has nearly level to gentle slopes. Some low areas are along the streams.

The soils in this association are deep, light-gray, and loamy to somewhat clayey. They have developed in alluvial material under a heavy forest. They range from well drained to poorly drained. The Half Moon and Depew soils occur on higher, well-drained sites; Stryker soils are on the low, moderately well drained sites, and the Radnor soils are on poorly drained sites. These alluvial soils are along the main streams that flow through this association.

A high percentage of this association has been cleared and is used for crops. More is being cleared each year. The main crops are small grain, alfalfa, and tame hay.

Creston-Flathead-Blanchard association

This association occurs in the eastern part of the Upper Flathead Valley Area. The topography is nearly level to gently sloping.

The soils of this association are deep, well drained, nearly black, and loamy and moderately sandy. They have developed in outwash and terrace alluvium under a heavy cover of grass. The Creston and Flathead soils are on the more nearly level areas; Blanchard and Yeoman soils are on low knolls, which are wooded in places.

Most of this association is cultivated. Some woods and grassland are on the more sandy knolls. The main crop are small grain and hay. Potatoes, peas, and specialty crops are also grown.

Mires-Blanchard association

This association is in the eastern part of the Upper Flathead Valley Area. Relief ranges from nearly level to gently rolling.

In this association are deep, nearly black sandy soils and shallow, gravelly soils that have developed in outwash and terrace alluvium under a dense cover of grass. Thin stands and patches of ponderosa pine grew in some parts. Drainage is moderate to excessive.

The Mires soils are on the more nearly level areas, and the Blanchard soils are on the sandy hummocks and knolls. Included with these soils are smaller acreages of Flathead and Yeoman soils.

About 75 percent of this association is cultivated, and the rest is in pasture and forest. The main crops are small grain and hay. Peas are grown on these soils in the southern part of the valley.

Kalispell-Tally, Blanchard, and Flathead association

This association occurs in the west-central part of the Upper Flathead Valley Area. Relief is mostly nearly level to gently rolling, but some small areas are steeper.

This association consists of deep, dark-brown, well-drained, loamy and moderately sandy soils and moderately deep, gravelly soils. These soils have developed in outwash and terrace alluvium under a moderate to heavy cover of grass. The Kalispell, Tally, Blanchard, and Flathead soils are in the more nearly level areas; some Kalispell soils are on the steeper slopes. Blanchard soils are on small dunes or knolls. Also in this association are Prospect soils on rolling terrain and Yeoman soils on the smoother spots composed of glacial material. The association also includes some Saline-alkali land.

The soils in this association are cultivated. The main crops are small grain and hay, including alfalfa. Most farms have a small pasture for live-stock.

Kalispell-Somers-Demers association

This association is in the south-central part of the Upper Flathead Valley Area. The topography is nearly level to gently sloping. In places there are small, curved, intermittent drainageways that were formed by stream overflow. Alkali spots are apparent in some of the fields.

In this association are mostly deep, dark-brown, well drained and moderately well drained, loamy to clayey soils. These soils have developed in terrace alluvium under a moderate to heavy cover of grass. The Kalispell soils are in well-drained sites; the Somers soils in moderately well drained sites. The Demers soils are on low ridges and have numerous slick spots. This association also includes some Saline-alkali land.

All of this association except the low wet spots and alkali areas is cultivated. The main crops are small grain, potatoes, peas, and mixed-grass hay.

Kiwanis-Walters-Birch association

This association is mainly in the central part of the Upper Flathead Valley Area. The area in which it occurs is a nearly level, low terrace, mainly between the Whitefish and Flathead Rivers. A few low spots occur within the area.

This association consists of deep to shallow, gray and dark grayish-brown, loamy to moderately sandy soils. These soils have developed in low-terrace stream alluvium, under trees and grass. They are well drained to excessively drained. Kiwanis, Walters, and Birch are the principal soils.

About half of this association has been cleared for cultivation or pasture, and more is being cleared each year. The main crops are small grain, hay, and pasture. Peas are also grown.

Swims association

This association is in the south-central part of the Upper Flathead Valley Area. It occurs in a nearly level area that contains some old channels of the Flathead River.

This association is made up of deep, gray, moderately well drained, loamy to clayey soils that have developed in low-terrace stream alluvium, under a cover that was mainly forest. The Swims are the main soils in the association, but the Chamokane soils are on some of the lower areas that are still in timber. Alluvial land, well drained, and alluvial land, poorly drained, are along the river.

Most of this association has been cleared and is in cultivation. The main crop is small grain; mixed grass hay is also produced.

Prospect-Yeoman, moderately deep over sand, association

This association is in the western part of the Upper Flathead Valley Area. The topography is gently sloping to rolling. When the land was cleared for cultivation, the many boulders that covered it were removed and piled in fields, or used for rock fences.

This association consists mainly of deep, dark-brown and nearly black, well-drained, stony loamy soils that developed in till under a moderate to heavy cover of grass. The Yeoman soils are moderately deep over sand and occupy gentle slopes. The Prospect soils occur on stronger slopes.

Most of this soil is in cultivation, mainly for small grains. The rest is in pasture.

Banks-Chamokane-Corvallis association

This association is mainly along the Flathead River. The topography varies. Slopes are usually nearly level to gently sloping, but there are many low, wet spots.

This association consists of deep, gray and grayish-brown, loamy soils and deep, sandy soils with sandy subsoils. These soils have developed in recent stream alluvium and under a cover of brush and trees. Soil drainage ranges from excessive to poor. In addition to the Banks, Chamokane, and Corvallis soils, this association also contains Muck and Peat and some Alluvial land, poorly drained.

Only about 25 percent of this association is cultivated. The rest is in pasture and in forest of mixed trees.

Half Moon-Haskill association

This association is in the southeastern part of the Upper Flathead Valley Area. It consists of nearly level to dunelike, kame-and-kettle areas.

The soils in this association are deep, light gray to brown, and loamy to sandy. They have developed in terrace and outwash alluvium under a cover of trees. They are well drained to excessively drained. The Half Moon soils are in more nearly level sites, and the Haskill soils are on the stronger slopes.

About 75 percent of this association has been cleared and is used mainly for small grain and pasture. The rest is in timber.

SECTION VIII - WATER RESOURCES

GENERAL

The water resource of a given area is of vital importance to the growth and development of that area. The uses of water are many and varied; such as domestic, commercial and industrial consumption, fire protection, irrigation of agricultural land and the generation of power. Every citizen should be concerned that our water resources are conserved and put to the best useful purpose. Not only should this water be put to beneficial use but it should be kept free from contamination and pollution from human and industrial waste. The scope of this study includes both the use of water resources for domestic water supplies, and the proper disposal of sewage wastes, to prevent contamination of the water resources.

Water resources are generally divided in two interrelated categories, ground water and surface water. It is difficult in some cases to consider one without the other. In times of heavy precipitation and surface runoff, the water seeps below the land surface to recharge the underground reservoirs, which in turn discharge ground water to streams and maintains their flow during dry periods. The amount of water stored underground is far greater than the amount of surface water in Montana. Without seepage from underground sources it is probable that nearly all streams in the state would cease to flow during dry periods.

SURFACE WATERS

Our concern over surface water rights in Montana is nearly a century old. The first territorial legislature meeting in Bannock, adopted on consecutive

days, the Common Law of England, considered to be the Doctrine of Riparian Rights, and the Doctrine of Prior Appropriation. Whether or not this actually provided Montana with one or two definitions of water rights was not settled until 1921 when the Montana Supreme Court declared the Doctrine of Prior Appropriation to be the valid Montana water right law.

The main points of consideration under the Doctrine of Prior Appropriation are:

1. The use of water may be acquired by both riparian and non-riparian land owners.
2. It allows diversion of water regardless of the reduction of the water supply in the stream.
3. The value of the right is determined by the priority of the appropriation, i.e., first in time is first in right.
4. The right is limited to the use of the water. Stream waters in Montana are the property of the State and the appropriator acquires only a right to their use. Moreover, this use must be beneficial.
5. A right to the use of water is considered property only in the sense that it can be bought or sold; its owner may not be deprived of it, except by due process of law.

The State Legislature has provided methods for acquisition, determination of priority and administration of water rights. On unadjudicated streams, the Statutes stipulate that diversion must be preceded by posting a notice at a point of intended diversion and by filing a copy of it within 20 days in the county clerk's office of the county in which the appropriation is being made. Construction

of the means of diversion must begin within 40 days of the posting and continue with reasonable diligence to completion. However, the Montana Supreme Court has ruled that an appropriator who fails to comply with the Statutes may still acquire a right merely by digging a ditch and putting the water to beneficial use.

As the demand for water in the streams becomes greater than its supply, the rights and priorities of each user can be determined by an adjudication of the water rights. This action may be initiated by one or more of the appropriators who may make all the other claimants parties to the suit. Thereupon, the judge of the district court examines the claims of all the claimants and issues a decree establishing priority of the right of each water user and the amount of water he is entitled to use. The court decree becomes in effect the deed of the appropriator to his water right.

It can readily be seen that this system of recording offers little protection to rights in the use of water until there is a determination by adjudication. In other words, an appropriator does not gain clear title to his water right until after adjudication and then the title may not be clear because of inadequacies of the system. The following table shows the filings of record for water rights on the various drainage courses in Flathead County:

TABLE NO. 13

WATER RIGHTS DATA - FLATHEAD COUNTY
Appropriations (Filings of Record)

<u>Stream, Including Tributaries</u>	<u>No. of Filings</u>	<u>Miner's Inches</u>	<u>Cu. Ft. per Sec.</u>
Kootenai River	29	12,460.00	311.50
Whitefish River	125	929,253.20	23,237.88

TABLE NO. 13 (Cont.)

<u>Stream, Including Tributaries</u>	<u>No. of Filings</u>	<u>Miner's Inches</u>	<u>Cu. Ft. per Sec.</u>
Stillwater River	390	1,771,708.20	44,325.21
Ashley Creek	307	152,660.30	3,816.50
Swan River	51	703,830.00	17,597.19
Little Bitterroot	53	166,049.00	4,151.23
Thompson River	14	2,050.00	51.25
Flathead River	42	3,127,000.00	78,175.00
Grand Total, Flathead County	1,387	7,533,209.32	188,397.45

In order to compare the claims or filings of records for water rights with the recorded stream flows, we are including the following record of stream flow at various recording stations on a variety of streams in the county.

TABLE NO. 14

RECORDED STREAM FLOWS

	<u>Drainage Area</u> <u>Sq. Mi.</u>	<u>Discharge in Cubic Feet</u>		
		<u>Max.</u>	<u>Min.</u>	<u>Average</u>
Flathead River near Columbia Falls	4,464	176,000	798	9,522 (35 yr.)
Stillwater River near Whitefish	524	4,330	40	340 (20 yr.)
Whitefish River near Kalispell	170	1,290	4.5	191 (21 yr.)
Ashley Creek near Kalispell	201	749	No flow at times	30.4 (17 yr.)
Little Bitterroot River near Hubbart	134	340	1.4	NA

By comparing Table No. 13 with Table No. 14 it is obvious that the claims for water rights far exceed the amount of water that is available from any given river. For example, on Ashley Creek there are claims for 3,816.50 cu. ft. per second whereas the recorded flow near Kalispell is a maximum of 749 cu. ft. per second, a minimum of "no flow" and an average of 30.4 cu. ft. per second. The claims on the Whitefish River amount to 23,237.88 cu. ft. per second whereas the recorded flow at Kalispell was a maximum of 1,290 cu. ft. per second, a minimum of 4.5 cu. ft. per second and an average of 191 cu. ft. per second. None of the rivers have been adjudicated. Of course the common practice of claimants is to file for an amount in excess of what they are using. As pointed out earlier no right may be acquired on a stream without diversion of water and its application to a beneficial use.

GROUND WATER

Although Montana's ground water resources are vast and only partly developed, this resource is now undergoing an accelerated development as the need for its uses increases and economical energy becomes available. In 1961 the 37th Legislature passed a bill to create a ground water code in Montana. This bill provided that the rights to surface water where the date of appropriation precedes January 1, 1962 shall take priority over all prior or subsequent ground water rights. The application of ground water to beneficial use prior to January 1, 1962 is recognized as a water right. Beneficial use shall be the extent and limit of the appropriated right. Appropriations of ground water after January 1, 1962 must be filed with the State Engineer of Montana. The appropriations of either surface or ground water after January 1,

1962 are based on "the first in time is first in right". It is important to note that the ground water law states "unless a notice of completion is filed with respect to any use of the ground water instituted after January 1, 1962, no right to that use of water shall be recognized".

The filing of water right records in the Central Office under control of the responsible state agency provides the efficient means for the orderly development and preservation of our water supply. It protects Montana's use of both ground and surface water.

WATER QUALITY CRITERIA

The Montana Water Pollution Control Council has adopted "Water Quality Criteria", "Water Use Classifications", and "Policy Statements". The Division of Environmental Sanitation of the State Department of Health has a control program to see that the water quality standards are followed. "They feel that with the recently adopted standards, the clean waters in Montana will be maintained and those waters that are currently degraded will be improved to meet the criteria established."

The minimum treatment requirements as set forth in the policy statements are as follows:

1. Domestic sewage -- the minimum treatment required for domestic sewage shall be secondary treatment or its equivalent with the understanding that properly designed and operated sewage lagoons will meet this requirement.
2. Industrial wastes -- the minimum treatment required for industrial wastes shall be secondary treatment or its equivalent.

The "Water Use Descriptions and Applications" assigned to the Columbia Basin Drainage in Montana are described as follows:

"A-Closed"--Water supply for drinking, culinary, and food processing purposes, suitable for use after simple disinfection. Public access and activities such as livestock grazing and timber harvest should be strictly controlled under conditions prescribed by the State Board of Health.

The Council has classified as "A-Closed" only those waters on which access is presently controlled by the utility owner. If other uses are permitted by the utility owner, these waters shall be reclassified "A-Open-D₁" or lower.

"A-Open-D₁" Water supply for drinking, culinary, and food processing purposes suitable for use after simple disinfection and removal of naturally present impurities. Water quality shall also be maintained suitable for the use of these waters for bathing, swimming and recreation (See "Note" below), (where these waters are used for swimming and other water contact sports, a higher degree of treatment may be required for potable water use); growth and propagation of salmonid fishes and associated aquatic life, waterfowl and furbearers; agricultural and industrial water supply.

Note: Common sense dictates that swimming and other water contact sports are inadvisable within a reasonable distance downstream from sewage treatment facility outfalls.

Waters in this class, if shown to meet the "A-Closed" criteria, may be so classified by the Council at the request of the utility owner.

All waters within the boundaries of national parks and nationally designated wilderness, wild, or primitive areas in Montana are classified "A-Open-D₁" except those adjacent to developed areas such as Snyder Creek through the community of Lake McDonald and Swift-current Creek below the Many Glacier Chalet, both in Glacier National Park. Also, Georgetown, Flathead, and Whitefish Lakes and Lake Mary Ronan are classified as "A-Open-D₁" as are some streams presently used for domestic water supply.

"B-D₁" The quality of these waters shall be maintained suitable for drinking, culinary and food processing purposes after adequate treatment equal to coagulation, sedimentation, filtration, disinfection, and any additional treatment necessary to remove naturally present impurities; bathing, swimming and recreation (see Note under "A-Open-D₁"); growth and propagation of salmonid fishes and associated aquatic life, waterfowl and furbearers; agricultural and industrial water supply.

"B-D₂" The quality of these waters shall be maintained suitable for the uses described for "B-D₁" waters except that the

fisheries use shall be described as follows:

"Growth and marginal propagation of salmonid fishes and associated aquatic life, waterfowl and furbearers."

"E " The quality of these waters shall be maintained for agricultural and industrial water supply uses.

The "Water Use Classification" for those drainages in Flathead County have been established by the Water Pollution Control Council subsequent to public hearings. These classifications are as follows:

	<u>Classification</u>
<u>Flathead River</u>	
Flathead River Drainage (except tributaries in Glacier National Park or in nationally designated wild, wilderness or primitive areas) except tributaries and lakes or reservoirs listed below:	B-D ₁
Essex Creek Drainage to the Essex water supply intake	A-Closed
Remainder of Essex Creek Drainage	B-D ₁
Snyder Creek (mainstem) through the community of Lake McDonald in Glacier National Park to Lake McDonald	B-D ₁
Stillwater River (mainstem) from (but excluding) Logan Creek to the Flathead River	B-D ₂
Whitefish Lake and its tributaries	A-Open-D ₁
Whitefish River (mainstem) from the outlet of Whitefish Lake to the Stillwater River	B-D ₂

	<u>Classification</u>
Haskill Creek Drainage to the Whitefish water supply intake	A-Open-D ₁
Remainder of Haskill Creek Drainage	B-D ₁
Remainder of Whitefish River Drainage	B-D ₁
Remainder of Stillwater River Drainage	B-D ₁
Ashley Creek Drainage to and including Smith (Kila) Lake	B-D ₁
Ashley Creek (mainstem) from Smith Lake to bridge crossing on the airport road about one mile south of Kalispell	B-D ₂
Ashley Creek (mainstem) from bridge crossing on the airport road to the Flathead River	E
All tributaries to Ashley Creek from Smith Lake to the Flathead River	B-D ₁
Flathead Lake and its tributaries except Flathead River above the Lake (as listed above) and a portion of Hellroaring Creek	A-Open-D ₁
Swan River Drainage (except Swan Lake proper)	B-D ₁
Little Bitterroot River Drainage to Hubbart Reservoir	B-D ₁

SECTION IX - WATER PLAN

GENERAL

The study of economic, population and housing trends in Flathead County points up the need for the expansion of existing water systems and the construction of new water systems to provide a good quality domestic water supply for the individual homes. Improved economic conditions have made it possible for many families to install such water consuming appliances as dishwashers, disposals, automatic washing machines and other labor saving devices. An examination of the housing trend indicates that between 1950 and 1960 the percentage of rural farm houses with hot and cold piped water increased from 46% to 86%. Although figures are not available a similar increase was prevalent for the rural/non-farm housing. These same homes have added indoor plumbing and are discharging sewage waste through septic tanks into the ground. Inasmuch as only 1% of the rural/farm and 39% of the rural/non-farm homes had a public water supply, and are generally getting well water from the same area as the septic tanks, it becomes evident that public water systems are critically needed in the immediate future.

DESIGN CRITERIA FOR PUBLIC WATER SYSTEMS

The principal elements of a public water system include supply, treatment, storage, transmission and distribution. The design of many of these elements is interrelated. For example, if the water supply is not adequate to meet the peak hour demand on the system, storage is necessary to provide a reserve for the peak hour demands.

The population to be served by a public utility must be determined prior to the analysis of the various elements of the system. Population trends as discussed in Section II indicate that there is a decrease in the rural/farm population and an increase in the rural/non-farm population. The population trends between 1940 and 1960 were considered in projecting the areas of most likely growth within the county. In predicting the population for each area, consideration was given to economic conditions, public utilities, natural resources, land use, and water resources, as they related to each area.

In years past the national average for annual water consumption has been 100 GPCD. However, in recent years this average water consumption has been steadily increasing. These averages are based on metering of all residential and commercial customers. Peak day consumption has been about 3 times the average annual rate of consumption. To allow for increased water usage, we have calculated the water demands of the various systems on the basis of the peak day consumption of 400 GPCD. This rate will be applicable for those systems that have metering of the residential customers. For those communities that choose not to meter the water users, an appropriate upward adjustment in their consumption rate would be necessary. The water systems serving the more densely populated areas should provide fire flows based on the population within the residential areas, in accordance with the Montana Fire Rating Bureau's recommendation of 500 gpm minimum. For small rural community water systems, we have used the criteria recommended by the Farmers Home Administration. This provides for a flow of 2 gpm per family.

Water supplies can be obtained either from ground or surface water, or a combination thereof. Domestic water sources should be clear, clean, safe and palatable. Industrial users can often use bacterially unsafe water but

they often require a water with a low mineral content. The quality of the ground water in Flathead County is presently considered to be good. The quality of the surface water is certainly far superior to the quality in most areas of the United States. Treatment of surface waters within the county is generally limited to chlorination and settling basins to reduce turbidity during periods of high runoff. Treatment of well water supplies is limited to chlorination, with many of the systems being supplied from wells having no treatment at all. The concentration of septic tanks in the same general area as public water supply wells, points up the need for a minimum treatment of chlorination on all systems. Operators of public water systems are required to submit a bacteriological quality analysis to the Montana State Department of Health.

The peak daily requirements are necessary to determine supply or well capacity, transmission line, treatment plant, and storage facility capacities. The distribution system capacities are designed on the instantaneous demands which usually include both consumption and fire flow requirements that are extremely variable and dependent upon many individual factors.

EXISTING FACILITIES

Before a plan can be prepared for the water needs of the county, an inventory of the existing utilities presently serving the county is necessary. The extent of the existing water improvements was ascertained from maps, plans and reports furnished from county, city, and utility company officials. This printed material was correlated with interviews and discussions with

the appropriate officials , along with the study and analysis of the annual reports filed with the Railroad and Public Service Commission. The following table summarizes the capacities and extent of improvements , along with the population served by the public utilities that are presently in operation in Flathead County.

TABLE NO. 15

Location	Population Served	Owner	Facilities		Capacities	
			Source	Storage	Source gpm	Storage MG
Whitefish	2,965	City	Spring area Lake pump	Reservoir None	1,000 2,000	9.5 None
Columbia Falls	2,132	City	Cedar & Crystal Cr. 2 wells	Reservoir None	N/A 1,000	1.28 None
Big Fork	618	Pacific Power & Light	2 wells	Ground tank	750	0.25
Hungry Horse	584	Federal	Well-pump (aux. power)	Ground tank	600	0.15
		Willows	well-pumps	Ground tank	575	0.06
		Mangan	Sand Cr.	Reservoir	800	1.28
Martin City	315	Baeth	3 wells	None	N/A	None
Coram	346	Water users	Spring-pump on time clock	wood tank	N/A	0.06
		Water users	Spring-pneu- matic pump	None	N/A	None
Somers	615	Milne	Lake & Pump (aux. power)	Elev. tank wooden standby	1,500	0.10
West Glacier	153	West Glac. Merc.	Spring area	None	250	0.10
Col. Heights	126	Steel	Well & pump	None	40	None
		Worrall	Well & pump	None	40	None

The City of Columbia Falls has recently passed a bond issue through which they will participate in a U.S. Soil Conservation project which will provide the City with 130 million gallons of reservoir storage.

Water maps for each of the areas shows the location of the area that is presently served, along with the general location of the existing water wells or booster stations, water treatment facilities, water storage tanks, water reservoirs and major water mains.

COUNTY WATER PLAN

The location and extent of improvements for the county water plan are shown on Exhibit No. 7 (County Water Map). This map shows the 5-10 year estimated needs for Creston, Lower Stillwater Lake, an area 4 to 5 miles west of Kalispell, and an area 4 to 5 miles southeast of Whitefish. Rural water systems, without fire protection, are adequate for these areas. To provide clarity of illustration, enlarged maps have been prepared for the major areas to be served with public water systems. These enlarged maps indicate the service area to be included in the 5-10 year plan, along with the general location of the major water mains, water reservoirs, water wells or water booster stations, water treatment plants, and water storage tanks for each area. For the incorporated cities of Whitefish and Columbia Falls, we have projected the expansion of their systems to serve the areas adjacent to their present city limits. We feel this is the most logical method of development of the utility to serve the entire area. The relative merits of conditions or stipulations which the governing body of the cities may require,

prior to expanding their water system into these areas , are not a consideration in the preparation of this plan. This plan has been prepared to show the most logical utility system for a given area , considering development and operation of the system. The population density for the service areas will not necessarily reach its ultimate density within the design period , but would have sufficient density of population to warrant construction of a water system to serve the area. As the population increases , public health is of paramount importance in justifying a water system for a given area.

The 10 - 20 year estimated needs for the county include providing water systems consisting of supply , storage , treatment , and distribution , but not to include fire protection , for the areas of Swan River , Holt , Mountain Brook , Ferndale , Montford School area , Rose Crossing , an area between Columbia Falls and Whitefish , another area between Half Moon and Rose Crossing , and an area northerly from Somers . The location of these water systems , which will be required to meet the future needs in the rural area , are shown on the County Water Map . The 10 - 20 year estimated needs for the major areas of consideration are shown on the enlarged sheets . As part of the 10 - 20 year plan , we recommend that the water systems for Columbia Falls and Columbia Heights be combined into one system . We also recommend that similar interties be made between the systems serving Hungry Horse , Martin City and Coram . The following table shows the existing supply and storage , along with projected population and usage figures for the 5 - 10 year and 10 - 20 year plans .

TABLE NO. 16

	EXISTING		5 - 10 Yr. Plan		10 - 20 Yr. Plan	
	Total Supply MGD	Total Storage MG	Estimated Needs Population	Estimated Needs Peak Use MGD	Estimated Needs Population	Estimated Needs Peak Use MGD
Whitefish	4.40	9.5	3,500	1.40	4,200	1.68
Adj. to White- fish	-----	---	-----	-----	3,000	1.20
Col. Falls	1.44	1.28	3,000	1.20	4,000	1.60
Adj. to Col. Falls	-----	-----	-----	-----	3,000	1.20
Col. Heights	0.11	None	140	0.09	500	0.20
Hungry Horse	2.85	1.49	640	0.26	800	0.32
Martin City	N/A	None	530	0.21	710	0.28
Coram	N/A	0.06	350	0.14	500	0.20
Big Fork	1.08	0.25	790	0.32	1,070	0.44
Somers	2.14	0.20	1,150	0.46	1,540	0.63
West Glacier	0.36	None	600	0.24	1,000	0.40
Half Moon			100	0.07	100	0.07
Kila			90	0.06	90	0.06
Lakeside			660	0.26	890	0.36
Olney			160	0.10	160	0.10
Mountain View			170	0.10	400	0.16
Lake Blaine			140	0.09	400	0.16
Essex			70	0.05	70	0.05
Marion			400	0.16	600	0.24
McGregor Lake			200	0.11	300	0.15
Lower Stillwater Lake			50	0.04	100	0.07
Creston			75	0.05	300	0.15
Area 4 mi. west of Kalispell			150	0.09	400	0.16
Area 4.5 mi. SE of Whitefish			50	0.04	300	0.15
Swan River					45	0.03
Holt					30	0.02
Mountain Brook					60	0.04
Ferndale					60	0.04
Montford School area					50	0.04
Rose Crossing					150	0.09
Between Col. Falls & Whitefish					300	0.15
Between Half Moon & Rose Crossing					150	0.09
North of Somers					150	0.09

SECTION X - SEWER PLAN

GENERAL

An analysis of the housing trends in Flathead County points up the need for public sewer systems to serve many of the areas in Flathead County. In 1960 less than 3% of the rural population within the county had a public sewer for the disposal of their sewage. A vast majority of these houses use septic tanks or cesspools discharging the effluent into the ground. The amount of sewage that any area can take varies greatly with the soil conditions in that area. There are limits to the amount of sewage that even a granular soil can take, over an extended period of time, in a densely populated area. To illustrate the tremendous increase that is occurring in the discharge of sewage into the ground, it is well to note that in 1950 there was a rural population of 18,490, of which 39% or about 7,000 had flush toilets inside their buildings. By 1960 this percentage had raised to 81%. It is certainly reasonable to assume that by 1990 the figure will be nearly 100%. The projected population for 1990 in the rural area including Columbia Falls is over 31,000. In other words, unless public sewer systems are constructed, by 1990 the number of septic tanks and cesspools will have increased 450%. The discharge of untreated domestic sewage will not only contaminate ground water in many areas, but much of the contamination will reach the lakes and streams; Flathead's most valuable natural resources.

DESIGN CRITERIA FOR PUBLIC SEWER SYSTEMS

The "Water Quality Criteria", "Water Use Classifications", and "Policy Statements" of the Montana Water Pollution Control Council for streams and rivers in Flathead County have been included in Section VIII. In accordance with this criteria the minimum treatment for domestic sewage and industrial wastes is secondary treatment or its equivalent. For domestic sewage, properly designed and operated sewage lagoons meet the requirements. A public sewer system includes lateral collection lines, trunk or outfall lines, and sewage treatment facilities. In some areas topography dictates that lift stations be used to pump sewage from low areas. Sewage treatment may be either by sewage lagoon or mechanical treatment plant. Many factors affect the selection between a mechanical treatment plant and a sewage lagoon. Such factors as topography, cost and availability of land, soil and ground water conditions, initial construction costs, and operating costs should all be considered in making the selection. Although our plans have indicated the type of sewage treatment, in many instances a detailed engineering study is necessary before a final decision can be made as to which is the most applicable type of treatment for each area.

The Montana State Board of Health has adopted the "Ten State Standards" as the criteria for the design of the various elements of the sewer system. The design flows set forth from this criteria are as follows:

1. Sewage treatment facilities -- 100 GPCD
2. Trunk sewer flows -- 250 GPCD
3. Lateral sewer flows -- 400 GPCD

The method of determining the estimated population to be served in each area was discussed in Section IX, Water Plan.

EXISTING FACILITIES

The extent of the existing sewer collection facilities in the county was determined by a survey similar to that conducted for the public water systems. At the present time there are only 3 public sewer systems in Flathead County serving the communities of Whitefish, Big Fork, and the federal buildings at Hungry Horse. The following table describes the population served, the owner of the system, the type of treatment and the capacity of the system.

TABLE NO. 17

EXISTING SEWER FACILITIES

<u>Location</u>	<u>Population Served</u>	<u>Owner</u>	<u>Facilities</u>	
			<u>Type</u>	<u>Capacity Pop.</u>
Whitefish	2,965	City	Lagoons	2,936
Big Fork	618	County	Contact Stabilization	750
Hungry Horse (Federal Camp)		Gov't	Imhoff tank	inadequate

Sewer maps for these areas show the area presently being served, the location of the interceptor and outfall sewers, the location of the sewage treatment facility, and any sewage pumping stations.

The City of Columbia Falls has a revenue bond issue planned for the fall of 1968 to finance a sanitary sewer system to serve the city. The construction of such a sewer system would be a major step forward in pollution control for Flathead County.

COUNTY SEWER PLAN

The location and extent of improvements for the county sewer plan are shown on Exhibit No. 8 (County Sewer Map). This map shows the 5 - 10 year estimated needs for the Lower Stillwater Lake, for the area approximately 4 miles west of Kalispell, and an outline of the areas on the enlarged maps of the public sewer systems. These enlarged maps show the proposed 5 - 10 year estimated needs including service area, interceptor and outfall sewers, sewage treatment plant, sewage treatment lagoons and sewage pumping stations. Consideration was given to population density and public health in arriving at the recommended areas to be included in the 5 - 10 year plan.

The 10 - 20 year plan includes extension of many of the public sewer systems proposed under the 5 - 10 year plan into areas of additional population growth. The 10 - 20 year estimated needs include providing additional public sewer systems for Rose Crossing, Creston, Mountain Brook area, Holt, Echo Lake, Swan River, Ferndale, and Montford School. The sewage maps indicate the location and extent of improvements with a different legend than that shown for the existing and 5 - 10 year plan. The following table shows the estimated population that can be served in each area and the estimated sewage flow for both the 5 - 10 year plan and the 10 - 20 year plan.

TABLE NO. 18

Service Area	Existing Treatment Capacity	5-10 yr. Estimated Needs		10-20 yr. Estimated Needs	
	MGD	pop.	Total Flow MGD	pop.	Total Flow MGD
Whitefish	0.29	3500	0.35	4200 city	0.42
Adj. to Whitefish	----	----	----	1500 rural	0.15
Columbia Falls	----	3000	0.30	4000 city	0.40
Adj. to Col. Falls	----	----	----	1500 rural	0.15
Col. Heights	----	140	0.01	500	0.05
Hungry Horse	----	640	0.06	700	0.07
Martin City	----	530	0.05	710	0.07
Coram	----	350	0.04	470	0.05
Half Moon	----	100	0.01	100	0.01
Kila	----	90	0.01	90	0.01
Somers	----	1150	0.12	1540	0.15
Big Fork	0.08	790	0.08	1070	0.11
Lake Side	----	660	0.07	890	0.09
Olney	----	160	0.02	160	0.02
West Glacier	----	600	0.06	1000	0.10
Mountain View	----	170	0.02	400	0.04
Lake Blaine	----	140	0.01	400	0.04
Essex	----	70	0.01	70	0.01
Marion	----	400	0.04	600	0.06
McGregor Lake	----	200	0.02	300	0.03
Lwr. Stillwater Lk.	----	200	0.02	300	0.03
Area 4 mi. w. of	----	150	0.02	400	0.04
Kalispell					
Rose Crossing	----	----	----	150	0.02
Creston	----	----	----	300	0.03
Mountain Brook	----	----	----	60	0.01
Area					
Holt	----	----	----	30	0.01
Echo Lake	----	----	----	150	0.02
Swan River	----	----	----	45	0.01
Ferndale	----	----	----	60	0.01
Montford School	----	----	----	50	0.01
South of	----	----	----	200	0.02
Whitefish					

Note: The following abbreviations were used in Sections IX and X of this report.

GPCD - gallons per capita per day
 gpm - gallons per minute
 MG - million gallons
 MGD - million gallons per day

REFERENCE MATERIAL

Soil Survey -- Upper Flathead Valley area, Montana -- U.S. Dept. of Agriculture -- Soil Conservation Service in cooperation with Montana Agricultural Experiment Station.

Water Resources Survey -- Flathead and Lincoln Counties, Montana -- Published by State Engineer's Office.

U.S. Census of Agriculture -- Flathead County, Montana -- U.S. Department of Commerce -- Bureau of the Census.

U.S. Census of Housing.

Climate Summary of the U.S. -- Montana Supplement For 1951 - through 1960 -- U.S. Department of Commerce -- Weather Bureau.

Historical Data, U.S. Census of Populators.

Montana Survey of Communities' Economic Development Potential-1963 -- Montana State Planning Board-In cooperation with- The Industrial Committee of the State Chamber of Commerce.

Directory of Mining Enterprises for 1967 -- State of Montana Bureau of Mines and Geology.

INFORMATION WAS FURNISHED BY OFFICIALS OF THE FOLLOWING ORGANIZATIONS

Whitefish City-Council Planning Board

Flathead County Commissioners

City of Whitefish

City of Columbia Falls

U.S. Soil Conservation Service

U.S. Forest Service

Bureau of Reclamation

Railroad & Public Service Commission

Pacific Power & Light Company

Montana Power Company

Bonneville Power Administration

THEAD COUNTY, MONTANA

LEGEND



Residential Area



Comprehensive Planning Area Boundary



Planning Area Exclusions



City-County Planning District



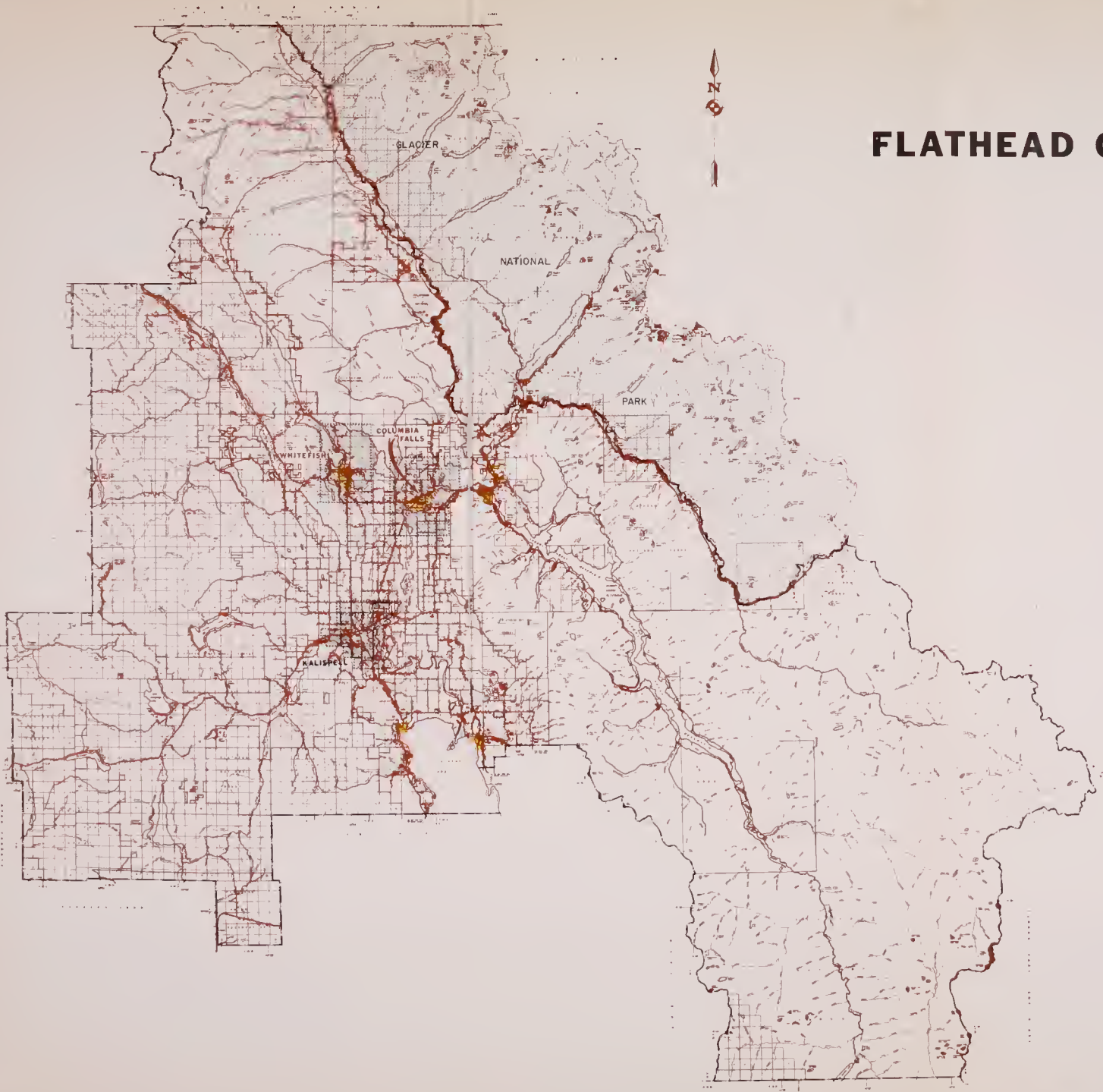
PLANNING AREA MAP

SCALE IN MILES



EXHIBIT NO. 1

FLATHEAD COUNTY, MONTANA



LEGEND

-  Residential Area
-  Comprehensive Planning Area Boundary
-  Planning Area Exclusions
-  City-County Planning District

PLANNING AREA MAP



LATHEAD COUNTY, MONTANA

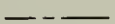
LEGEND



County Seat



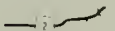
City, Town or Village



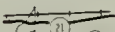
County Boundary Line



Railroad



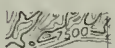
U. S. Highway



State Highway



Other Principal Roads



Contours - Interval, 500' - Mean Sea Level



TOPOGRAPHIC MAP

SCALE IN MILES



EXHIBIT NO. 2

LATHEAD COUNTY, MONTANA

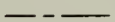
LEGEND



County Seat



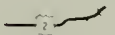
City, Town or Village



County Boundary Line



Railroad



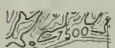
U. S. Highway



State Highway



Other Principal Roads



Contours - Interval, 500' - Mean Sea Level



TOPOGRAPHIC MAP

SCALE IN MILES



EXHIBIT NO. 2

FLATHEAD COUNTY, MONTANA

LEGEND



County Seat



City, Town or Village



County Boundary Line



Railroad



U. S. Highway



State Highway



Other Principal Roads



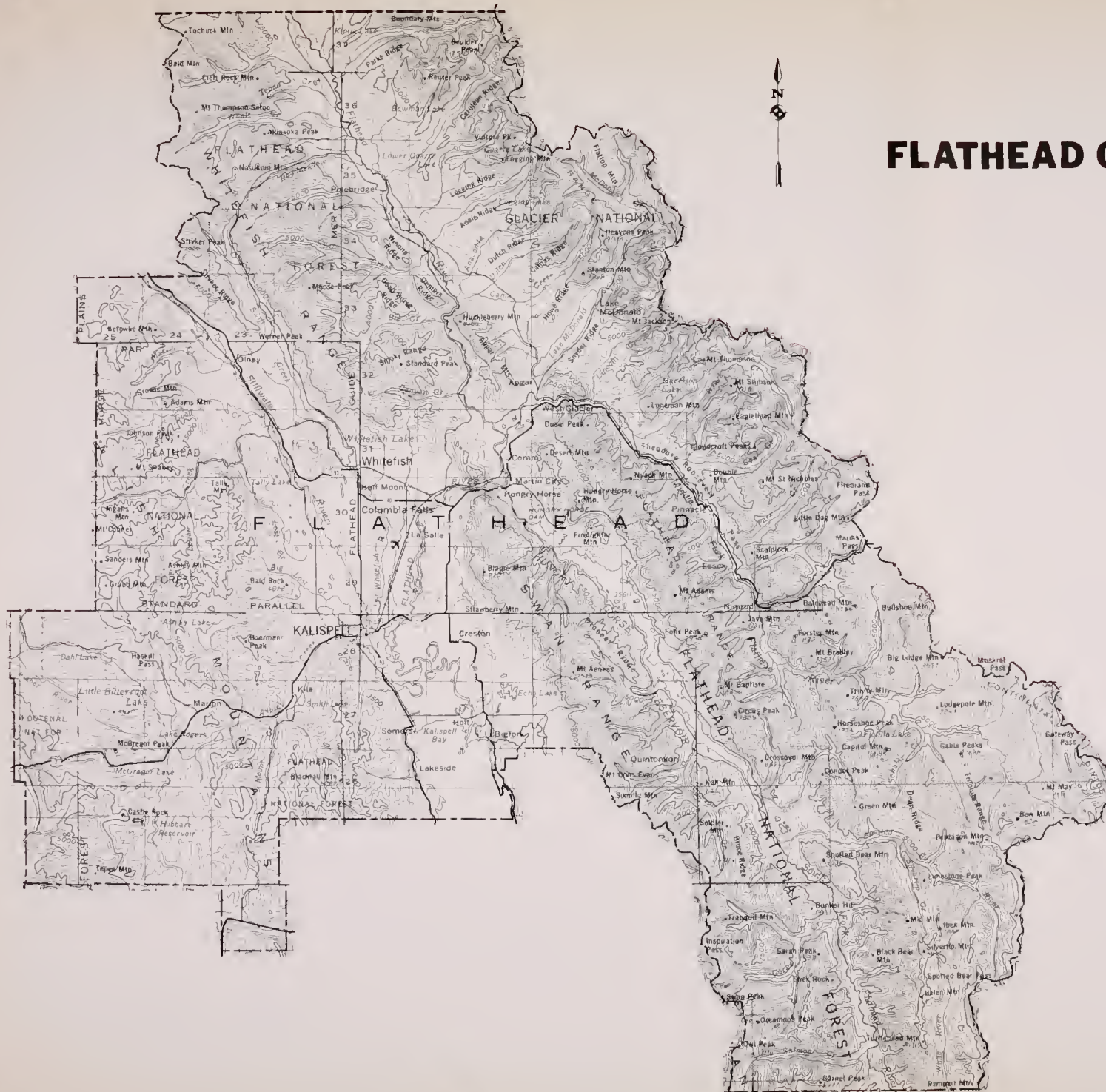
Contours - Interval, 500' - Mean Sea Level

TOPOGRAPHIC MAP

SCALE IN MILES



EXHIBIT NO. 2



THEAD COUNTY, MONTANA

LEGEND



Residential Area



Comprehensive Planning Area Boundary



Planning Area Exclusions



Highway



Railroads



Abandoned Railroad



Power Transmission Line



Gas Transmission Line



Railroad Depot



Paved Airport



Non-Paved Landing Strip



PUBLIC UTILITIES MAP

SCALE IN MILES



EXHIBIT NO. 3

THEAD COUNTY, MONTANA

LEGEND



Residential Area



Comprehensive Planning Area Boundary



Planning Area Exclusions



Highway



Railroads



Abandoned Railroad



Power Transmission Line



Gas Transmission Line



Railroad Depot



Paved Airport



Non-Paved Landing Strip



PUBLIC UTILITIES MAP

SCALE IN MILES



EXHIBIT NO. 3

FLATHEAD COUNTY, MONTANA

LEGEND



Residential Area



Comprehensive Planning Area Boundary



Planning Area Exclusions



Highway



Railroads



Abandoned Railroad



Power Transmission Line



Gas Transmission Line



Railroad Depot



Paved Airport



Non-Paved Landing Strip

PUBLIC UTILITIES MAP

SCALE IN MILES



EXHIBIT NO. 3

THEAD COUNTY, MONTANA

LEGEND



Residential Area



Comprehensive Planning Area Boundary



Planning Area Exclusions



National Forest



State Land



PUBLIC LAND MAP

SCALE IN MILES



EXHIBIT NO. 4

THEAD COUNTY, MONTANA

LEGEND



Residential Area



Comprehensive Planning Area Boundary



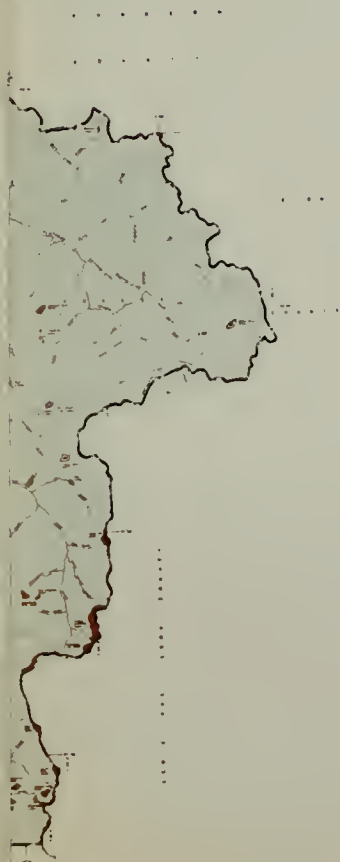
Planning Area Exclusions



National Forest



State Land



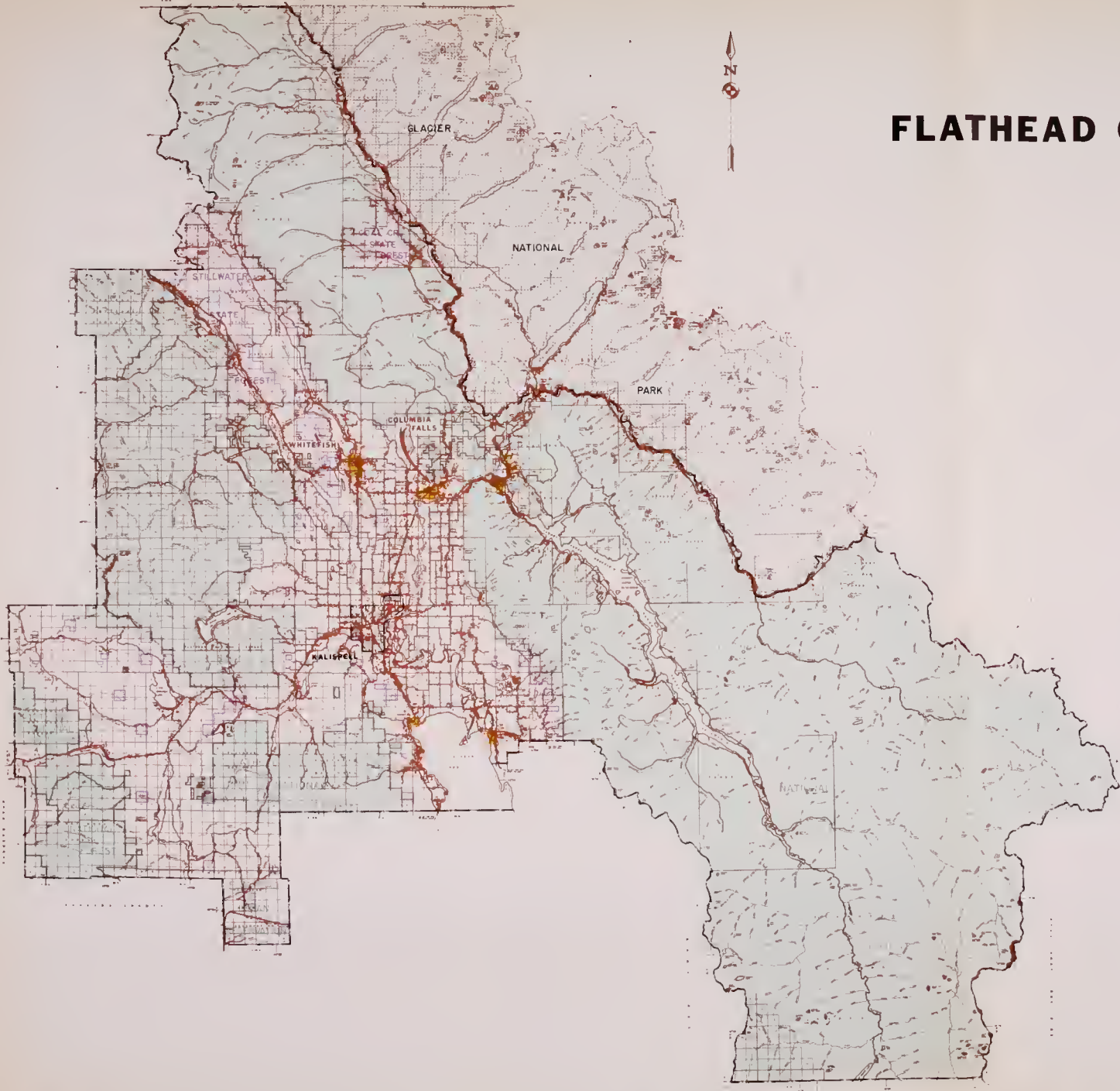
PUBLIC LAND MAP

SCALE IN MILES



EXHIBIT NO. 4

FLATHEAD COUNTY, MONTANA



LEGEND

-  Residential Area
-  Comprehensive Planning Area Boundary
-  Planning Area Exclusions
-  National Forest
-  State Land

PUBLIC LAND MAP



EXHIBIT NO. 4

THEAD COUNTY, MONTANA

LEGEND



Residential Area



Comprehensive Planning Area Boundary



Planning Area Exclusions



Agricultural Land



Woodland



Commercial And Industrial Area



Recreational Area



LAND USE MAP

SCALE IN MILES



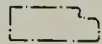
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THEAD COUNTY, MONTANA

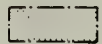
LEGEND



Residential Area



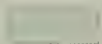
Comprehensive Planning Area Boundary



Planning Area Exclusions



Agricultural Land



Woodland



Commercial And Industrial Area



Recreational Area



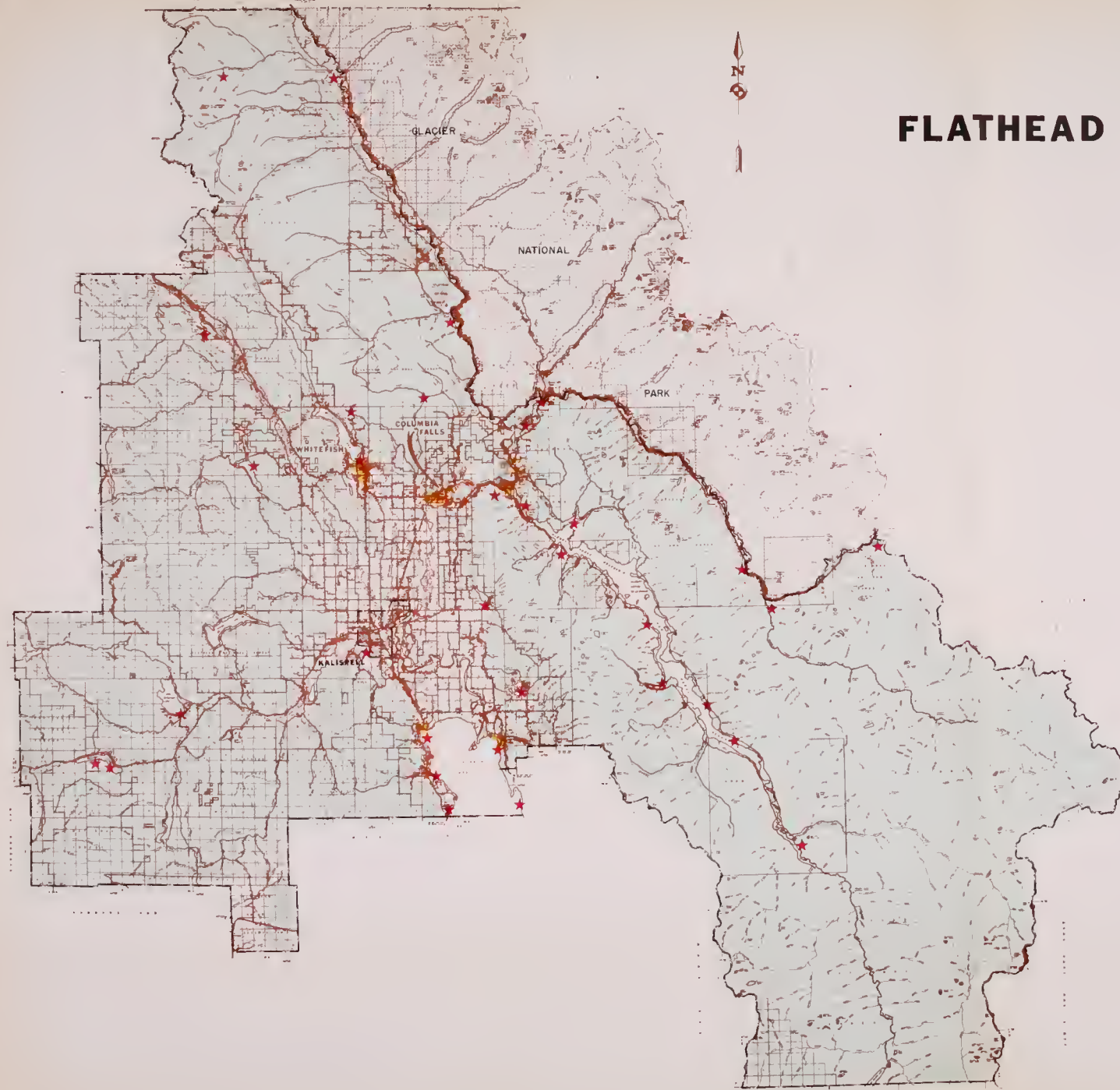
LAND USE MAP

SCALE IN MILES



EXHIBIT NO. 5

FLATHEAD COUNTY, MONTANA



LEGEND

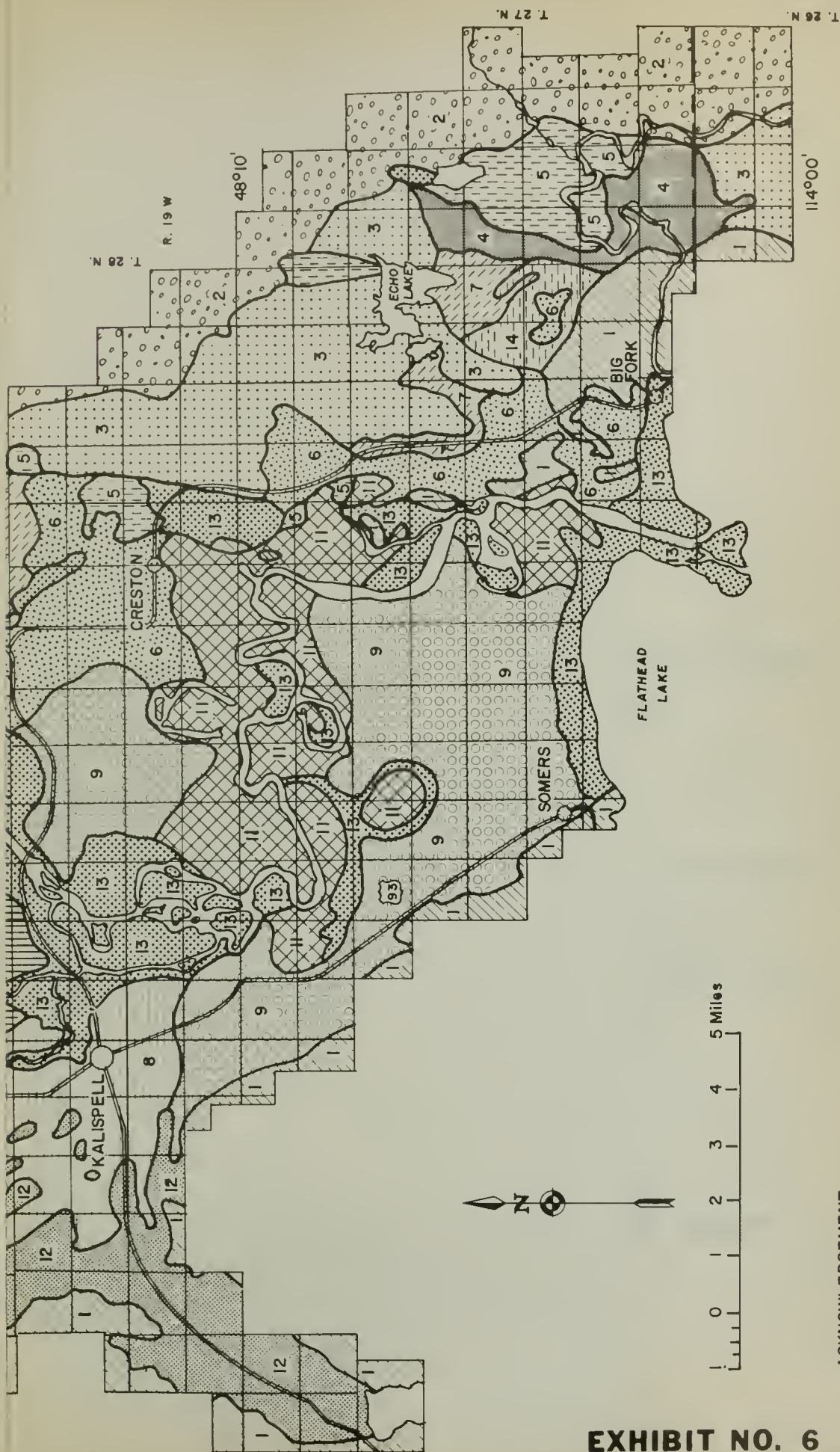
-  **Recreational Area**
-  **Comprehensive Planning Area Boundary**
-  **Planning Area Exclusions**
-  **Agricultural Land**
-  **Woodland**
-  **Commercial And Industrial Area**
-  **Recreational Area**

LAND USE MAP

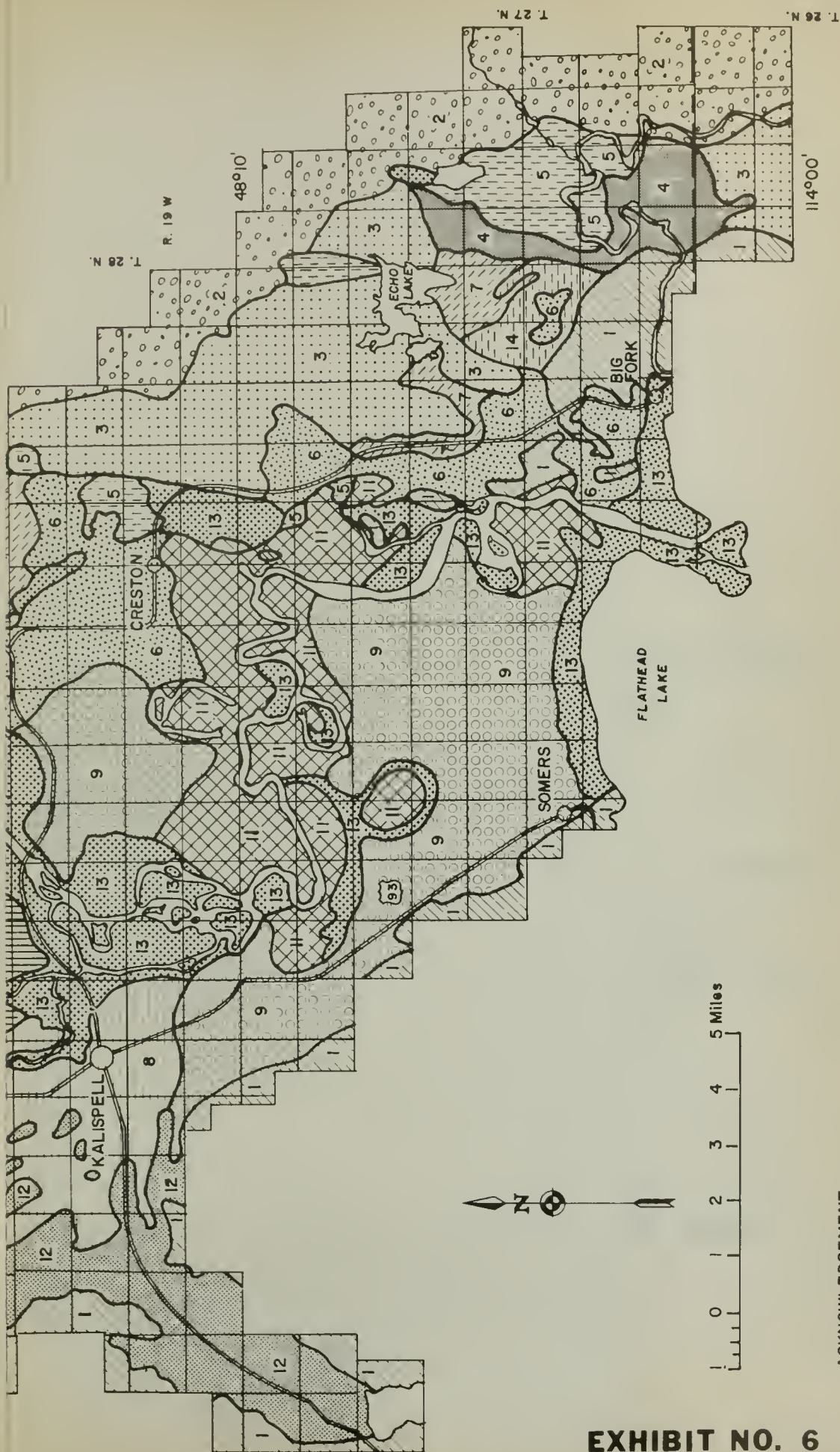
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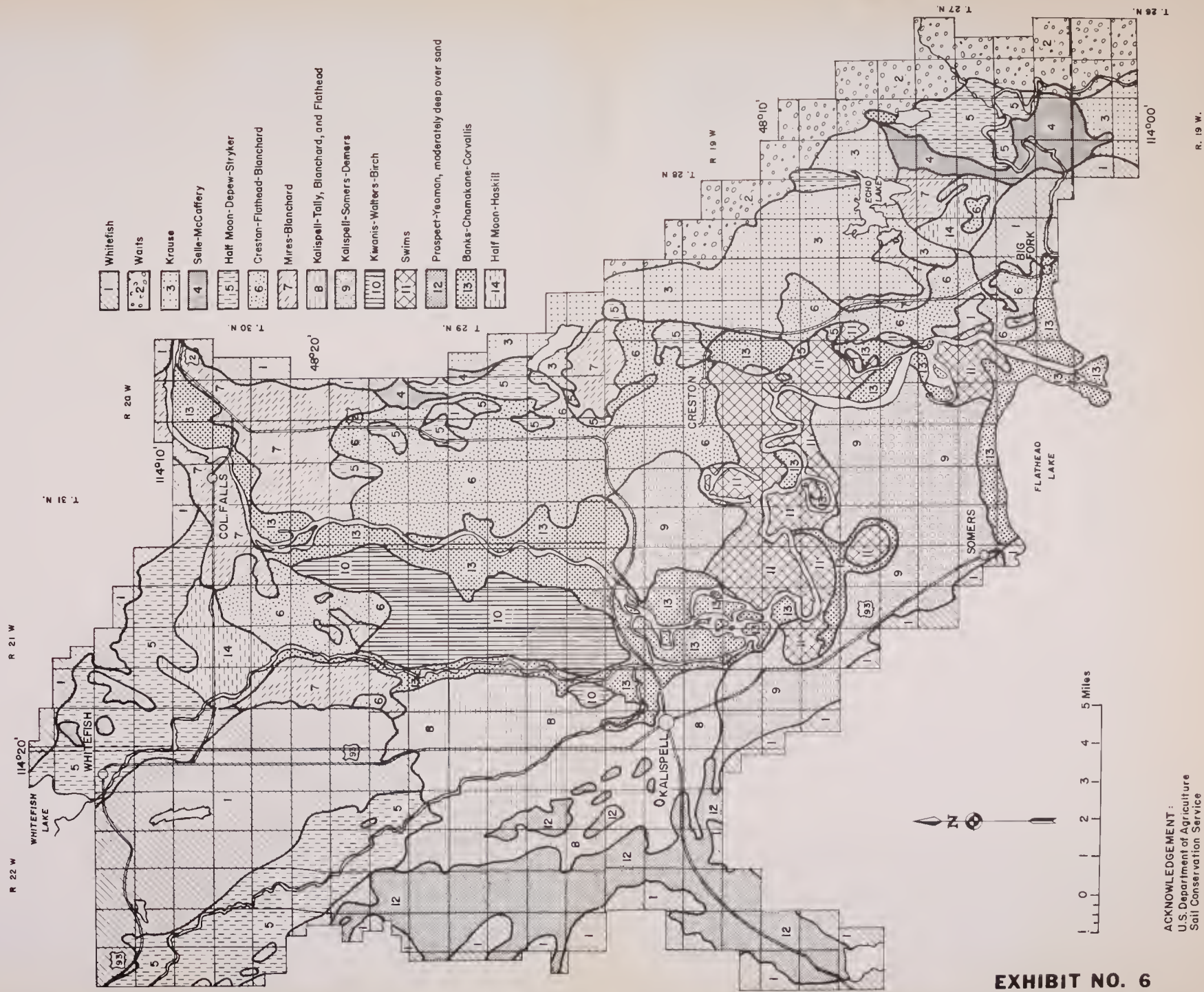
ACKNOWLEDGEMENT:
U.S. Department of Agriculture
Soil Conservation Service



ACKNOWLEDGEMENT :
U.S. Department of Agriculture
Soil Conservation Service

UPPER FLATHEAD VALLEY AREA, MONTANA

SOIL ASSOCIATION MAP



THEAD COUNTY, MONTANA

LEGEND



Residential Area



Comprehensive Planning Area Boundary



Planning Area Exclusions

EXISTING

5-10YR.
EST.NEEDS

10-20YR.
EST.NEEDS



Water Treatment Plant



Storage Tank



Well Or Booster Pump



Reservoir



Major Mains



Water Service Area



Area Detailed On Larger Scale Map

COUNTY WATER MAP

SCALE IN MILES



EXHIBIT NO. 7

THEAD COUNTY, MONTANA

LEGEND



Residential Area



Comprehensive Planning Area Boundary



Planning Area Exclusions

EXISTING

5-10YR.
EST.NEEDS

10-20YR.
EST.NEEDS



Water Treatment Plant



Storage Tank



Well Or Booster Pump



Reservoir



Major Mains



Water Service Area



Area Detailed On Larger Scale Map

COUNTY WATER MAP

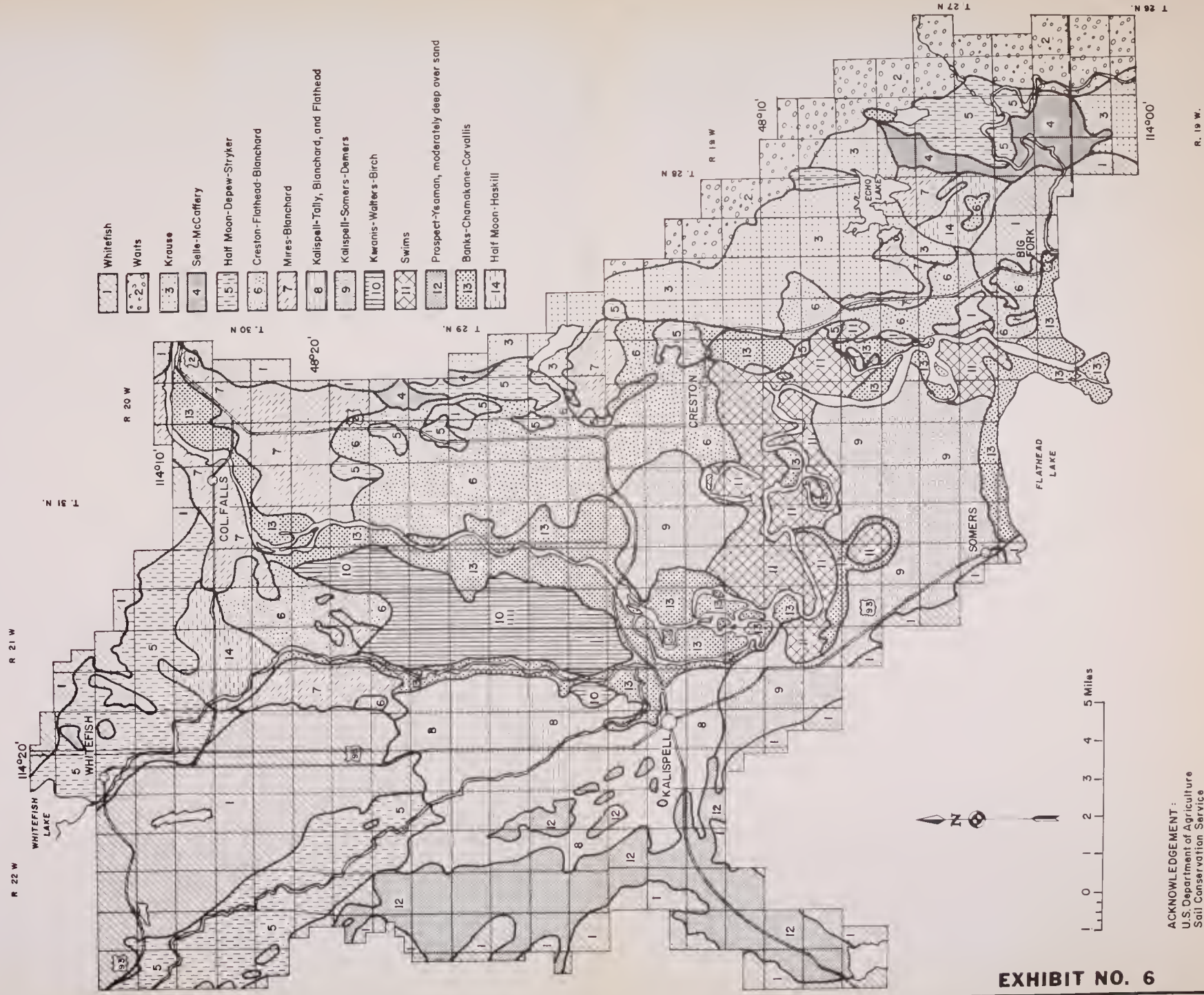
SCALE IN MILES



EXHIBIT NO. 7

UPPER FLATHEAD VALLEY AREA, MONTANA

SOIL ASSOCIATION MAP



THEAD COUNTY, MONTANA

LEGEND



Residential Area



Comprehensive Planning Area Boundary



Planning Area Exclusions

EXISTING

5-10 YR.
EST.NEEDS

10-20 YR.
EST.NEEDS



Sewage Treatment Plant



Lagoon



Booster Station



Sewage Service Area



Area Detailed On Larger Scale Map



COUNTY SEWER MAP

SCALE IN MILES



EXHIBIT NO. 8

THEAD COUNTY, MONTANA

LEGEND



Residential Area



Comprehensive Planning Area Boundary



Planning Area Exclusions

EXISTING

5-10 YR.
EST.NEEDS

10-20 YR.
EST.NEEDS



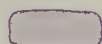
Sewage Treatment Plant



Lagoon



Booster Station



Sewage Service Area



Area Detailed On Larger Scale Map



COUNTY SEWER MAP

SCALE IN MILES



EXHIBIT NO. 8

FLATHEAD COUNTY, MONTANA

LEGEND



Residential Area



Comprehensive Planning Area Boundary

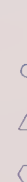


Planning Area Exclusions

EXISTING

5-10YR.
EST.NEEDS

10-20YR.
EST.NEEDS



Water Treatment Plant



Storage Tank



Well Or Booster Pump



Reservoir



Major Mains



Water Service Area



Area Detailed On Larger Scale Map

COUNTY WATER MAP

SCALE IN MILES



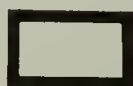
EXHIBIT NO. 7



FLATHEAD COUNTY MONTANA

LEGEND

EXISTING



Service Area



Major Water Mains



Water Reservoir



Water Well or Booster
Station



Water Treatment
Plant



Water Storage
Tank

PROPOSED

5 - 10YR.
EST. NEEDS



10-20YR.
EST. NEEDS



Service Area

Major Water Mains

Water Reservoir

Water Well or Booster Station

Water Treatment Plant

Water Storage Tank

WHITEFISH WATER SERVICE AREA

SCALE IN MILES



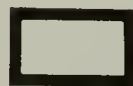
EXHIBIT NO. 9



FLATHEAD COUNTY MONTANA

LEGEND

EXISTING



Service Area



Major Water Mains



Water Reservoir



Water Well or Booster
Station



Water Treatment
Plant



Water Storage
Tank

PROPOSED

5 - 10YR. EST. NEEDS



10-20YR. EST. NEEDS



Service Area

Major Water Mains

Water Reservoir

Water Well or Booster Station

Water Treatment Plant

Water Storage Tank

WHITEFISH WATER SERVICE AREA

SCALE IN MILES



EXHIBIT NO. 9

FLATHEAD COUNTY, MONTANA



LEGEND



Residential Area



Comprehensive Planning Area Boundary



Planning Area Exclusions

EXISTING

5-10YR.
EST.NEEDS

10-20YR.
EST.NEEDS



Sewage Treatment Plant



Lagoon



Booster Station



Sewage Service Area



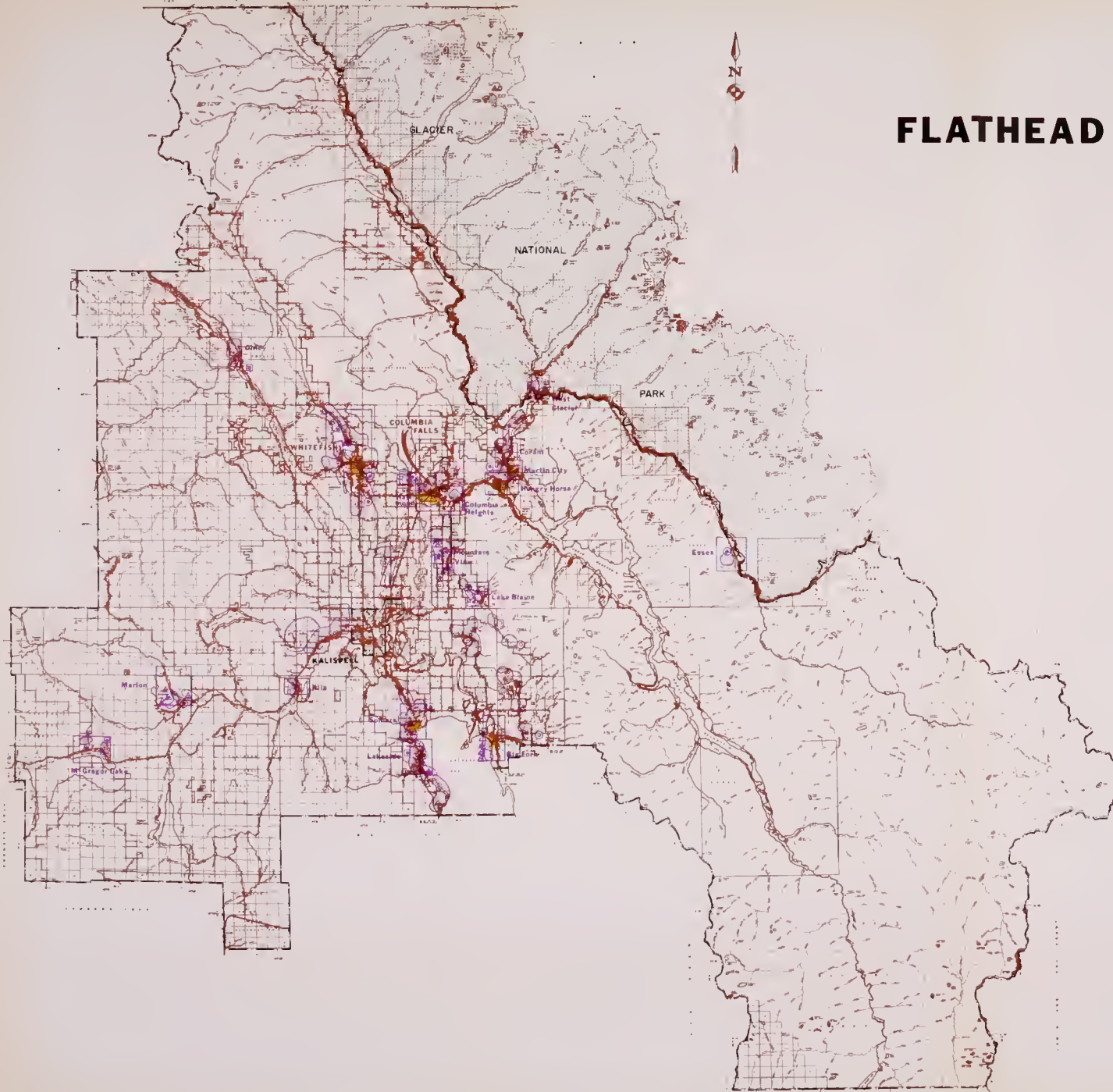
Area Detailed On Larger Scale Map

COUNTY SEWER MAP

SCALE IN MILES



EXHIBIT NO. 8

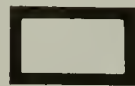




FLATHEAD COUNTY MONTANA

LEGEND

EXISTING



Service Area



Major Water Mains



Water Reservoir



Water Well or Booster
Station



Water Treatment
Plant



Water Storage
Tank

PROPOSED

5 - 10YR. EST. NEEDS



10-20YR. EST. NEEDS



Service Area

Major Water Mains

Water Reservoir

Water Well or Booster Station

Water Treatment Plant

Water Storage Tank

COLUMBIA FALLS WATER SERVICE AREA

SCALE IN MILES



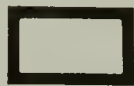
EXHIBIT NO. 10



FLATHEAD COUNTY MONTANA

LEGEND

EXISTING



Service Area



Major Water Mains



Water Reservoir



Water Well or Booster
Station



Water Treatment
Plant



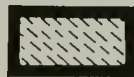
Water Storage
Tank

PROPOSED

5 - 10YR. EST. NEEDS



10-20YR. EST. NEEDS



Service Area

Major Water Mains

Water Reservoir

Water Well or Booster Station

Water Treatment Plant

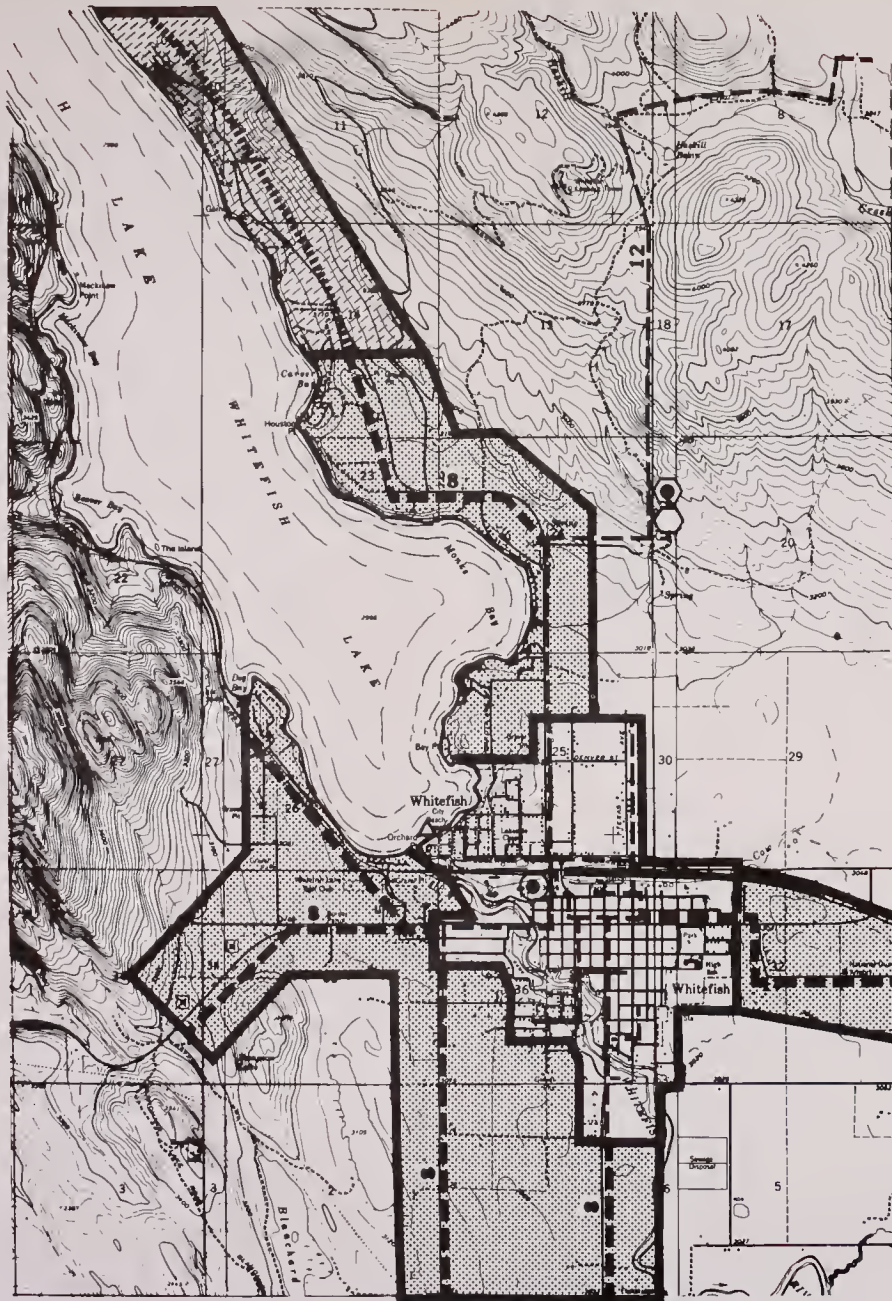
Water Storage Tank

COLUMBIA FALLS WATER SERVICE AREA

SCALE IN MILES



EXHIBIT NO. 10



FLATHEAD COUNTY MONTANA

LEGEND

EXISTING

	Service Area		Water Well or Booster Station
	Major Water Mains		Water Treatment Plant
	Water Reservoir		Water Storage Tank

PROPOSED

5 - 10YR. EST. NEEDS



10-20YR. EST. NEEDS



Service Area

Major Water Mains

Water Reservoir

Water Well or Booster Station

Water Treatment Plant

Water Storage Tank

WHITEFISH WATER SERVICE AREA

SCALE IN MILES



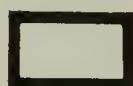
EXHIBIT NO. 9



FLATHEAD COUNTY MONTANA

LEGEND

EXISTING



Service Area



Major Water Mains



Water Reservoir



Water Well or Booster
Station



Water Treatment
Plant



Water Storage
Tank

PROPOSED

5 - 10YR.
EST. NEEDS



10-20YR.
EST. NEEDS



Service Area

Major Water Mains

Water Reservoir

Water Well or Booster Station

Water Treatment Plant

Water Storage Tank

BIG FORK WATER SERVICE AREA

SCALE IN MILES



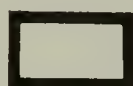
EXHIBIT NO. 11



FLATHEAD COUNTY MONTANA

LEGEND

EXISTING



Service Area



Major Water Mains



Water Reservoir



Water Well or Booster
Station



Water Treatment
Plant



Water Storage
Tank

PROPOSED

5 - 10YR.
EST. NEEDS



10-20YR.
EST. NEEDS



Service Area

Major Water Mains

Water Reservoir

Water Well or Booster Station

Water Treatment Plant

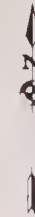
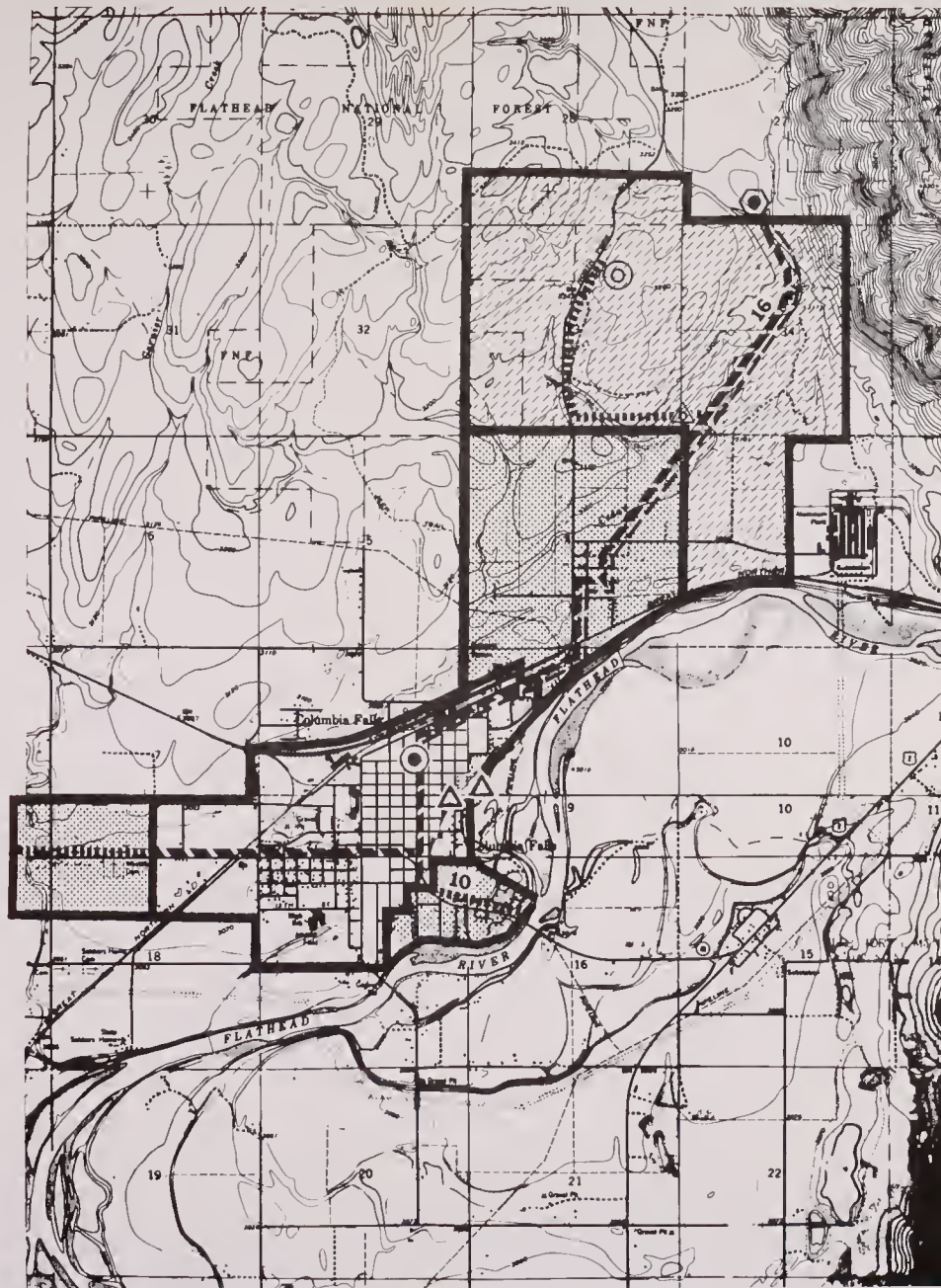
Water Storage Tank

BIG FORK WATER SERVICE AREA

SCALE IN MILES



EXHIBIT NO. 11



FLATHEAD COUNTY MONTANA

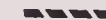
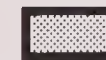
LEGEND

EXISTING

	Service Area		Water Well or Booster Station
	Major Water Mains		Water Treatment Plant
	Water Reservoir		Water Storage Tank

PROPOSED

5 - 10YR. EST. NEEDS



10-20YR. EST. NEEDS



Service Area

Major Water Mains

Water Reservoir

Water Well or Booster Station

Water Treatment Plant

Water Storage Tank

COLUMBIA FALLS WATER SERVICE AREA

SCALE IN MILES



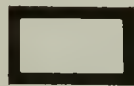
EXHIBIT NO. 10



FLATHEAD COUNTY MONTANA

LEGEND

EXISTING



Service Area



Major Water Mains



Water Reservoir



Water Well or Booster
Station



Water Treatment
Plant



Water Storage
Tank

PROPOSED

5 - 10YR. EST. NEEDS



10-20YR. EST. NEEDS



Service Area

Major Water Mains

Water Reservoir

Water Well or Booster Station

Water Treatment Plant

Water Storage Tank

COLUMBIA HEIGHTS WATER SERVICE AREA

SCALE IN MILES

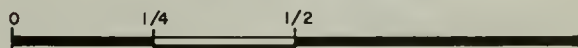


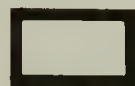
EXHIBIT NO. 12



FLATHEAD COUNTY MONTANA

LEGEND

EXISTING



Service Area



Major Water Mains



Water Reservoir



Water Well or Booster
Station



Water Treatment
Plant



Water Storage
Tank

PROPOSED

5 - 10YR. EST. NEEDS



10-20YR. EST. NEEDS



Service Area

Major Water Mains

Water Reservoir

Water Well or Booster Station

Water Treatment Plant

Water Storage Tank

COLUMBIA HEIGHTS WATER SERVICE AREA

SCALE IN MILES

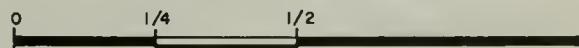
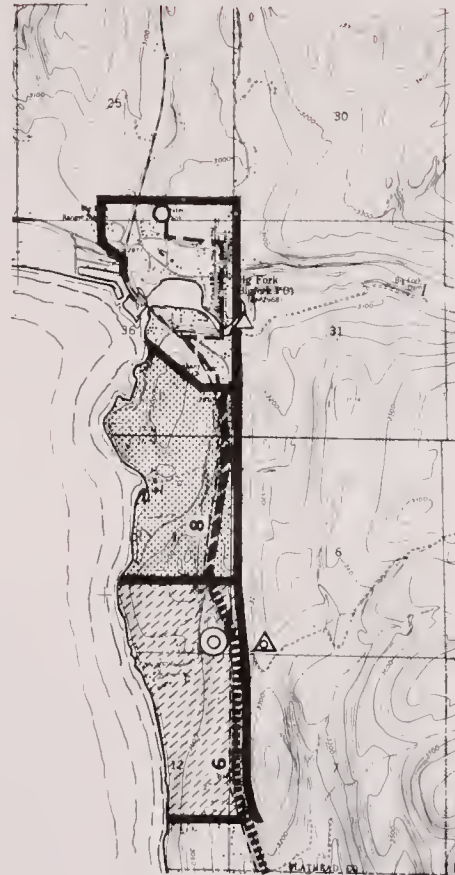


EXHIBIT NO. 12



FLATHEAD COUNTY MONTANA



LEGEND

EXISTING

	Service Area		Water Well or Booster Station
	Major Water Mains		Water Treatment Plant
	Water Reservoir		Water Storage Tank

PROPOSED

5 - 10YR. EST. NEEDS



10-20YR. EST. NEEDS



Service Area

Major Water Mains

Water Reservoir

Water Well or Booster Station

Water Treatment Plant

Water Storage Tank

BIG FORK WATER SERVICE AREA

SCALE IN MILES



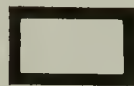
EXHIBIT NO. 11



FLATHEAD COUNTY MONTANA

LEGEND

EXISTING



Service Area



Major Water Mains



Water Reservoir



Water Well or Booster
Station



Water Treatment
Plant



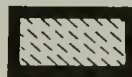
Water Storage
Tank

PROPOSED

5 - 10YR. EST. NEEDS



10-20YR. EST. NEEDS



Service Area

Major Water Mains

Water Reservoir

Water Well or Booster Station

Water Treatment Plant

Water Storage Tank

CORAM WATER SERVICE AREA

SCALE IN MILES

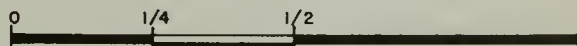


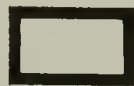
EXHIBIT NO. 13



FLATHEAD COUNTY MONTANA

LEGEND

EXISTING



Service Area



Major Water Mains



Water Reservoir



Water Well or Booster
Station



Water Treatment
Plant



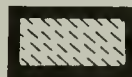
Water Storage
Tank

PROPOSED

5 - 10YR. EST. NEEDS



10-20YR. EST. NEEDS



Service Area

Major Water Mains

Water Reservoir

Water Well or Booster Station

Water Treatment Plant

Water Storage Tank

CORAM WATER SERVICE AREA

SCALE IN MILES

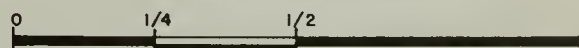
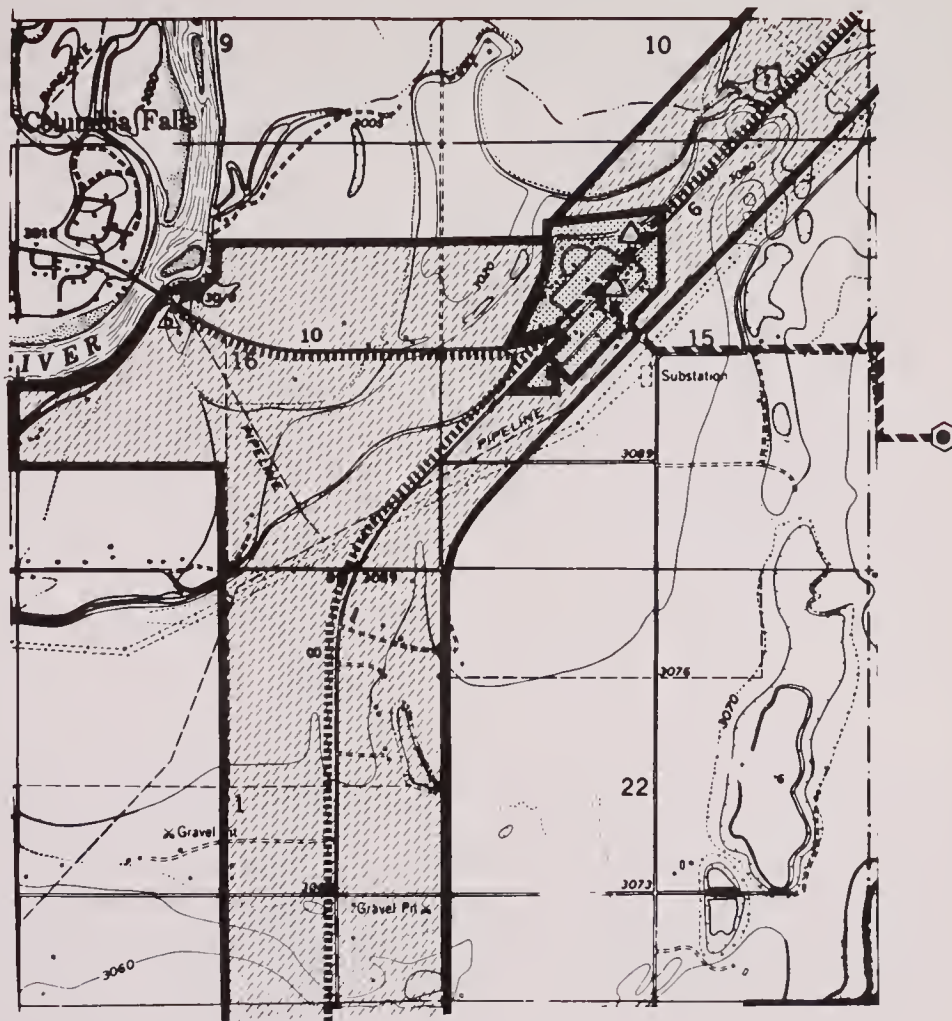


EXHIBIT NO. 13

FLATHEAD COUNTY MONTANA

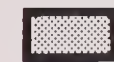


LEGEND EXISTING

- | | | | |
|---|-------------------|---|-------------------------------|
|  | Service Area |  | Water Well or Booster Station |
|  | Major Water Mains |  | Water Treatment Plant |
|  | Water Reservoir |  | Water Storage Tank |

PROPOSED

5 - 10YR. EST. NEEDS



10-20YR. EST. NEEDS



Service Area

Major Water Mains

Water Reservoir

Water Well or Booster Station

Water Treatment Plant

Water Storage Tank

COLUMBIA HEIGHTS WATER SERVICE AREA

SCALE IN MILES

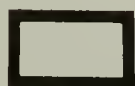




FLATHEAD COUNTY MONTANA

LEGEND

EXISTING



Service Area



Major Water Mains



Water Reservoir



Water Well or Booster
Station



Water Treatment
Plant



Water Storage
Tank

PROPOSED

5 - 10YR. EST. NEEDS



10-20YR. EST. NEEDS



Service Area

Major Water Mains

Water Reservoir

Water Well or Booster Station

Water Treatment Plant

Water Storage Tank

ESSEX WATER SERVICE AREA

SCALE IN MILES

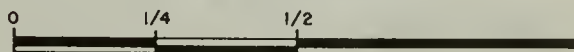


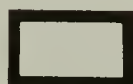
EXHIBIT NO. 14



FLATHEAD COUNTY MONTANA

LEGEND

EXISTING



Service Area



Major Water Mains



Water Reservoir



Water Well or Booster
Station



Water Treatment
Plant



Water Storage
Tank

PROPOSED

5 - 10YR. EST. NEEDS



10-20YR. EST. NEEDS



Service Area

Major Water Mains

Water Reservoir

Water Well or Booster Station

Water Treatment Plant

Water Storage Tank

ESSEX WATER SERVICE AREA

SCALE IN MILES

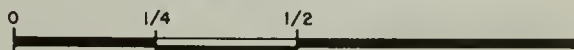
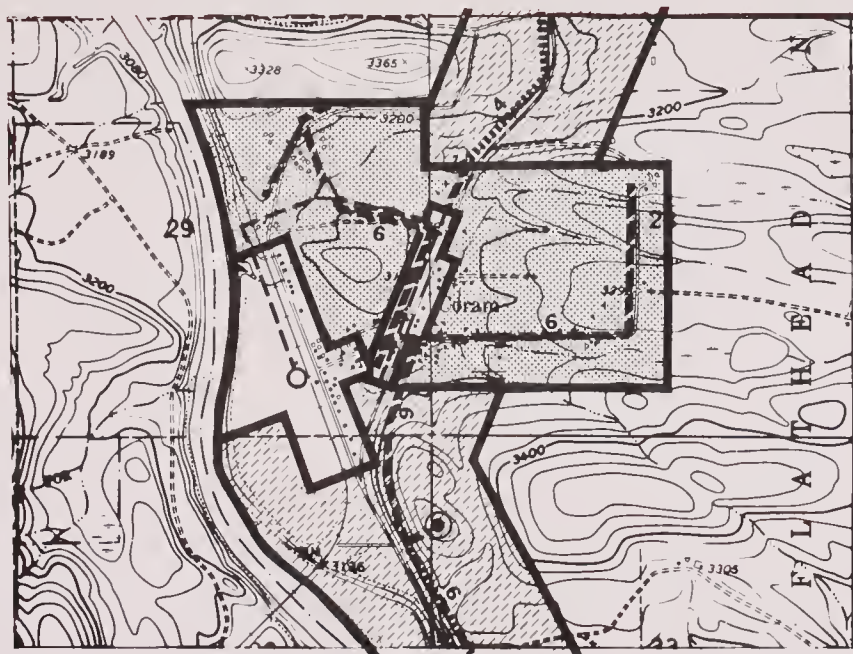


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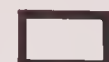


FLATHEAD COUNTY MONTANA



LEGEND

EXISTING

	Service Area		Water Well or Booster Station
	Major Water Mains		Water Treatment Plant
	Water Reservoir		Water Storage Tank

PROPOSED

5 - 10YR. EST. NEEDS



10-20YR. EST. NEEDS



Service Area

Major Water Mains

Water Reservoir

Water Well or Booster Station

Water Treatment Plant

Water Storage Tank

CORAM WATER SERVICE AREA

SCALE IN MILES

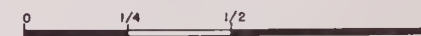


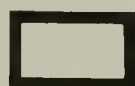
EXHIBIT NO. 13



FLATHEAD COUNTY MONTANA

LEGEND

EXISTING



Service Area



Major Water Mains



Water Reservoir



Water Well or Booster
Station



Water Treatment
Plant



Water Storage
Tank

PROPOSED

5 - 10YR. EST. NEEDS



10-20YR. EST. NEEDS



Service Area

Major Water Mains

Water Reservoir

Water Well or Booster Station

Water Treatment Plant

Water Storage Tank

HALFMOON WATER SERVICE AREA

SCALE IN MILES



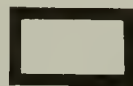
EXHIBIT NO. 15



FLATHEAD COUNTY MONTANA

LEGEND

EXISTING



Service Area



Major Water Mains



Water Reservoir



Water Well or Booster
Station



Water Treatment
Plant



Water Storage
Tank

PROPOSED

5 - 10YR. EST. NEEDS



10-20YR. EST. NEEDS



Service Area

Major Water Mains

Water Reservoir

Water Well or Booster Station

Water Treatment Plant

Water Storage Tank

HALFMOON WATER SERVICE AREA

SCALE IN MILES

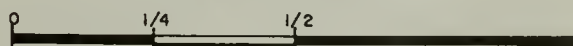


EXHIBIT NO. 15

FLATHEAD COUNTY MONTANA

LEGEND EXISTING

	Service Area		Water Well or Booster Station
	Major Water Mains		Water Treatment Plant
	Water Reservoir		Water Storage Tank

PROPOSED

5 - 10YR. EST. NEEDS



10-20YR. EST. NEEDS



Service Area

Major Water Mains

Water Reservoir

Water Well or Booster Station

Water Treatment Plant

Water Storage Tank

ESSEX WATER SERVICE AREA

SCALE IN MILES

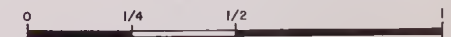


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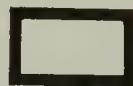




FLATHEAD COUNTY MONTANA

LEGEND

EXISTING



Service Area



Major Water Mains



Water Reservoir



Water Well or Booster
Station



Water Treatment
Plant



Water Storage
Tank

PROPOSED

5 - 10 YR. EST. NEEDS



10-20 YR. EST. NEEDS



Service Area

Major Water Mains

Water Reservoir

Water Well or Booster Station

Water Treatment Plant

Water Storage Tank

HUNGRY HORSE WATER SERVICE AREA

SCALE IN MILES

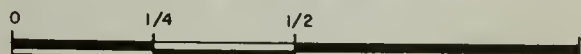


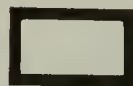
EXHIBIT NO. 16



FLATHEAD COUNTY MONTANA

LEGEND

EXISTING



Service Area



Major Water Mains



Water Reservoir



Water Well or Booster
Station



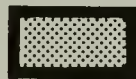
Water Treatment
Plant



Water Storage
Tank

PROPOSED

5 - 10 YR. EST. NEEDS



10-20 YR. EST. NEEDS



Service Area

Major Water Mains

Water Reservoir

Water Well or Booster Station

Water Treatment Plant

Water Storage Tank

HUNGRY HORSE WATER SERVICE AREA

SCALE IN MILES

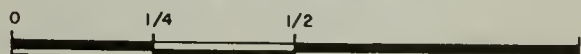


EXHIBIT NO. 16

FLATHEAD COUNTY MONTANA

LEGEND

EXISTING

	Service Area		Water Well or Booster Station
	Major Water Mains		Water Treatment Plant
	Water Reservoir		Water Storage Tank

PROPOSED

5 - 10YR. EST. NEEDS



10-20YR. EST. NEEDS



Service Area

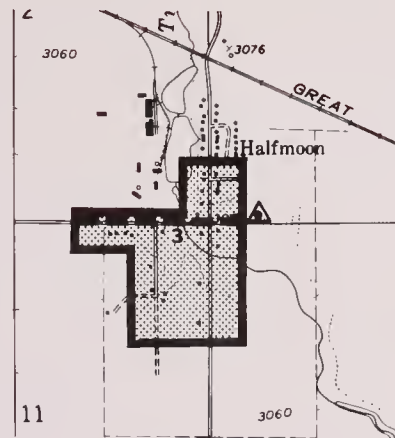
Major Water Mains

Water Reservoir

Water Well or Booster Station

Water Treatment Plant

Water Storage Tank



HALFMOON WATER SERVICE AREA

SCALE IN MILES



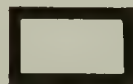
EXHIBIT NO. 15



FLATHEAD COUNTY MONTANA

LEGEND

EXISTING



Service Area



Major Water Mains



Water Reservoir



Water Well or Booster
Station



Water Treatment
Plant



Water Storage
Tank

PROPOSED

5 - 10YR. EST. NEEDS



10-20YR. EST. NEEDS



Service Area

Major Water Mains

Water Reservoir

Water Well or Booster Station

Water Treatment Plant

Water Storage Tank

KILA WATER SERVICE AREA

SCALE IN MILES

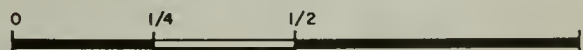


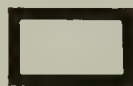
EXHIBIT NO. 17



FLATHEAD COUNTY MONTANA

LEGEND

EXISTING



Service Area



Major Water Mains



Water Reservoir



Water Well or Booster
Station



Water Treatment
Plant



Water Storage
Tank

PROPOSED

5 - 10 YR. EST. NEEDS



10-20 YR. EST. NEEDS



Service Area

Major Water Mains

Water Reservoir

Water Well or Booster Station

Water Treatment Plant

Water Storage Tank

KILA WATER SERVICE AREA

SCALE IN MILES

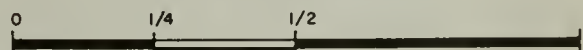
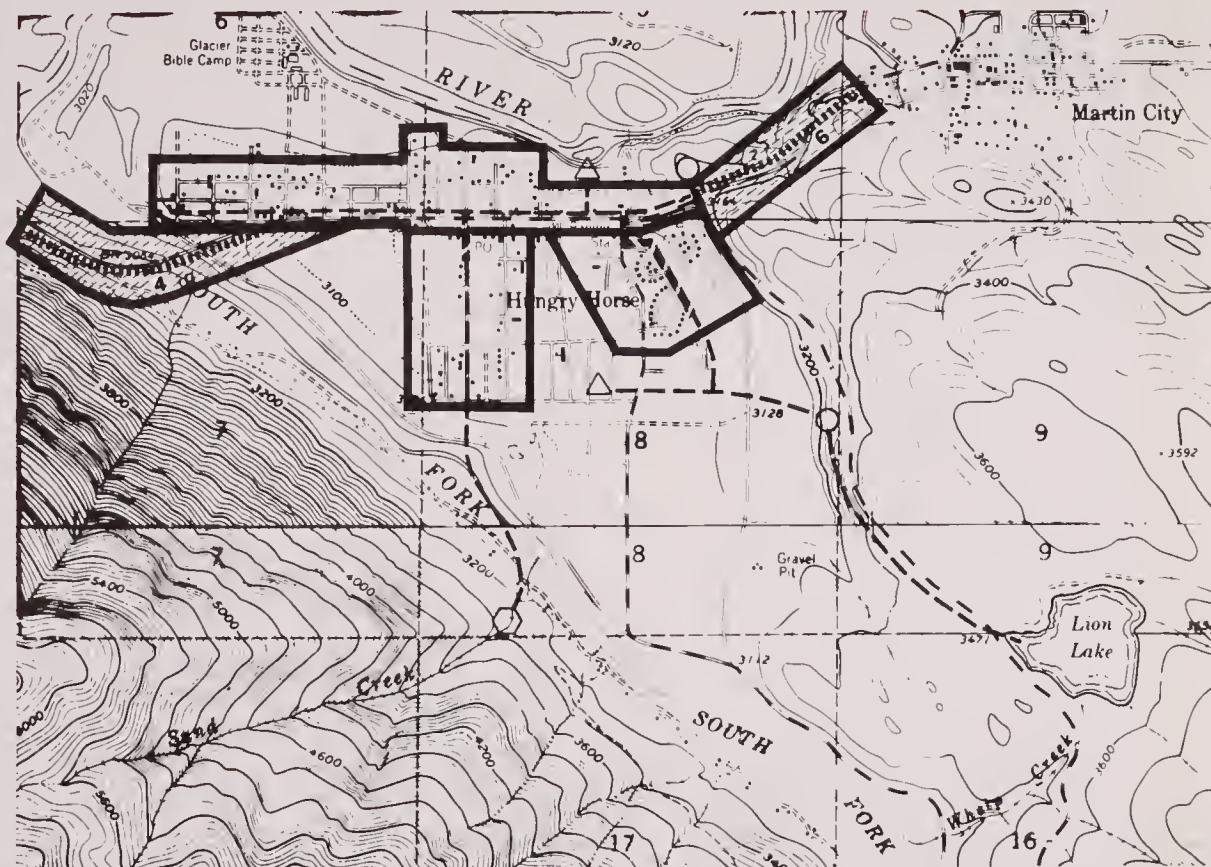


EXHIBIT NO. 17

FLATHEAD COUNTY MONTANA



LEGEND EXISTING

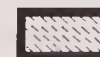
	Service Area		Water Well or Booster Station
	Major Water Mains		Water Treatment Plant
	Water Reservoir		Water Storage Tank

PROPOSED

S - 10YR. EST. NEEDS



10-20YR. EST. NEEDS



Service Area

Major Water Mains

Water Reservoir

Water Well or Booster Station

Water Treatment Plant

Water Storage Tank

HUNGRY HORSE WATER SERVICE AREA

SCALE IN MILES

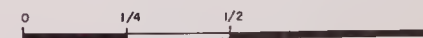


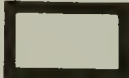
EXHIBIT NO. 16



FLATHEAD COUNTY MONTANA

LEGEND

EXISTING

	Service Area		Water Well or Booster Station
	Major Water Mains		Water Treatment Plant
	Water Reservoir		Water Storage Tank

PROPOSED

5 - 10YR. EST. NEEDS



10-20YR. EST. NEEDS



Service Area

Major Water Mains

Water Reservoir

Water Well or Booster Station

Water Treatment Plant

Water Storage Tank

LAKE BLAINE WATER SERVICE AREA

SCALE IN MILES

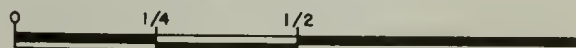


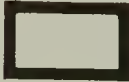
EXHIBIT NO. 18



FLATHEAD COUNTY MONTANA

LEGEND

EXISTING

	Service Area		Water Well or Booster Station
	Major Water Mains		Water Treatment Plant
	Water Reservoir		Water Storage Tank

PROPOSED

5 - 10YR. EST. NEEDS



10-20YR. EST. NEEDS



Service Area

Major Water Mains

Water Reservoir

Water Well or Booster Station

Water Treatment Plant

Water Storage Tank

LAKE BLAINE WATER SERVICE AREA

SCALE IN MILES

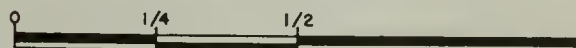


EXHIBIT NO. 18



FLATHEAD COUNTY MONTANA

LEGEND

EXISTING

	Service Area		Water Well or Booster Station
	Major Water Mains		Water Treatment Plant
	Water Reservoir		Water Storage Tank

PROPOSED

5 - 10YR. EST. NEEDS



10-20YR. EST. NEEDS



Service Area

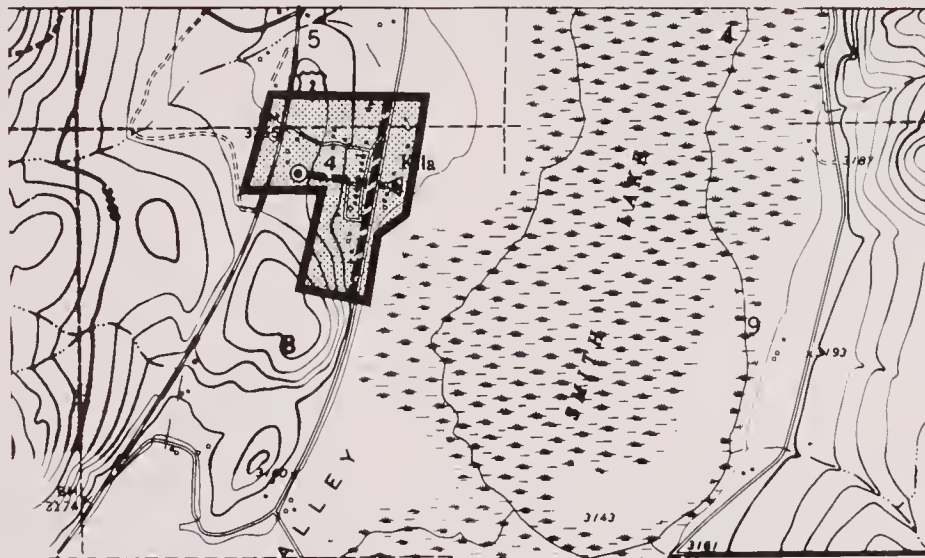
Major Water Mains

Water Reservoir

Water Well or Booster Station

Water Treatment Plant

Water Storage Tank



KILA WATER SERVICE AREA

SCALE IN MILES



EXHIBIT NO. 17



FLATHEAD COUNTY MONTANA

LEGEND

EXISTING



Service Area



Major Water Mains



Water Reservoir



Water Well or Booster
Station



Water Treatment
Plant



Water Storage
Tank

PROPOSED

5 - 10YR. EST. NEEDS



10-20YR. EST. NEEDS



Service Area

Major Water Mains

Water Reservoir

Water Well or Booster Station

Water Treatment Plant

Water Storage Tank

LAKESIDE WATER SERVICE AREA

SCALE IN MILES

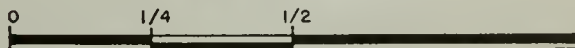


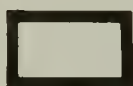
EXHIBIT NO. 19



FLATHEAD COUNTY MONTANA

LEGEND

EXISTING



Service Area



Major Water Mains



Water Reservoir



Water Well or Booster
Station



Water Treatment
Plant



Water Storage
Tank

PROPOSED

5 - 10YR. EST. NEEDS



10-20YR. EST. NEEDS



Service Area

Major Water Mains

Water Reservoir

Water Well or Booster Station

Water Treatment Plant

Water Storage Tank

LAKESIDE WATER SERVICE AREA

SCALE IN MILES

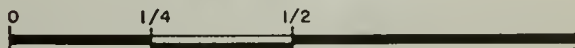


EXHIBIT NO. 19

FLATHEAD COUNTY MONTANA

LEGEND EXISTING

	Service Area		Water Well or Booster Station
	Major Water Mains		Water Treatment Plant
	Water Reservoir		Water Storage Tank

PROPOSED

5 - 10YR. EST. NEEDS



10-20YR. EST. NEEDS



Service Area

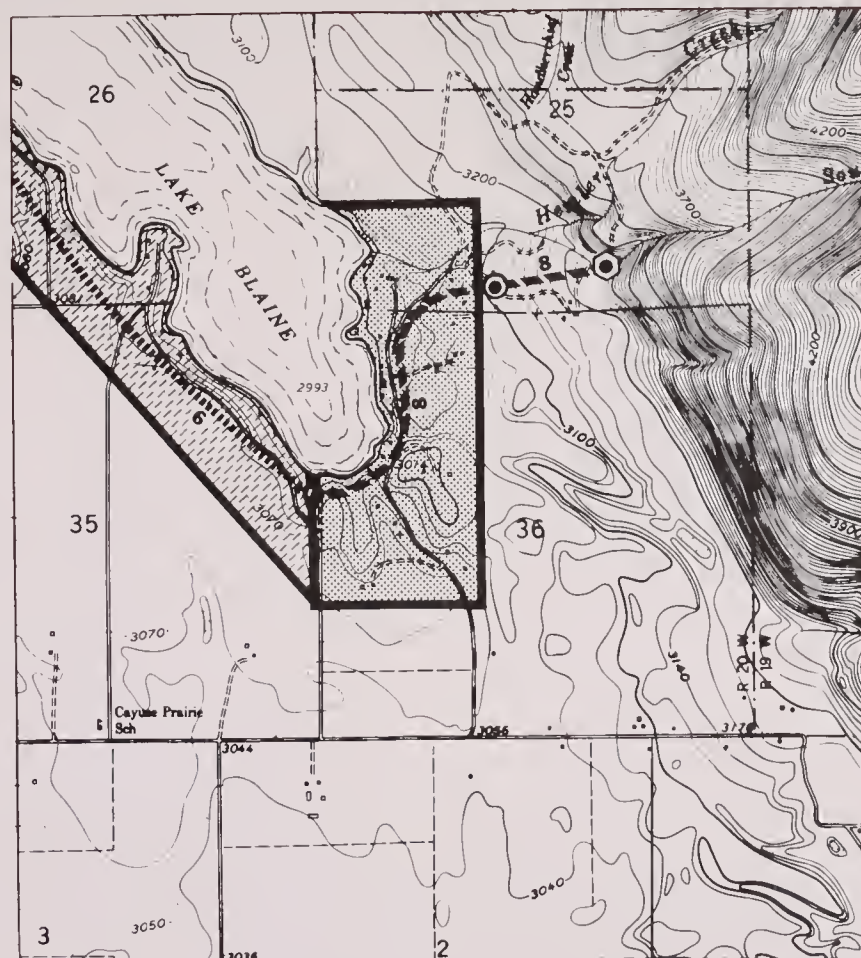
Major Water Mains

Water Reservoir

Water Well or Booster Station

Water Treatment Plant

Water Storage Tank



LAKE BLAINE WATER SERVICE AREA

SCALE IN MILES

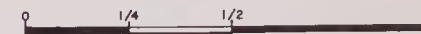
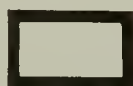


EXHIBIT NO. 18

FLATHEAD COUNTY MONTANA

LEGEND

EXISTING



Service Area



Major Water Mains



Water Reservoir



Water Well or Booster
Station



Water Treatment
Plant



Water Storage
Tank

PROPOSED

5 - 10YR. EST. NEEDS



10-20YR. EST. NEEDS



Service Area

Major Water Mains

Water Reservoir

Water Well or Booster Station

Water Treatment Plant

Water Storage Tank

MARION WATER SERVICE AREA

SCALE IN MILES

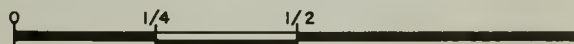
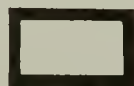


EXHIBIT NO. 20

FLATHEAD COUNTY MONTANA

LEGEND

EXISTING



Service Area



Major Water Mains



Water Reservoir



Water Well or Booster Station



Water Treatment Plant



Water Storage Tank

PROPOSED

5 - 10YR. EST. NEEDS



10-20YR. EST. NEEDS



Service Area



Major Water Mains



Water Reservoir



Water Well or Booster Station



Water Treatment Plant



Water Storage Tank

MARION WATER SERVICE AREA

SCALE IN MILES

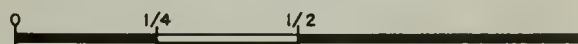
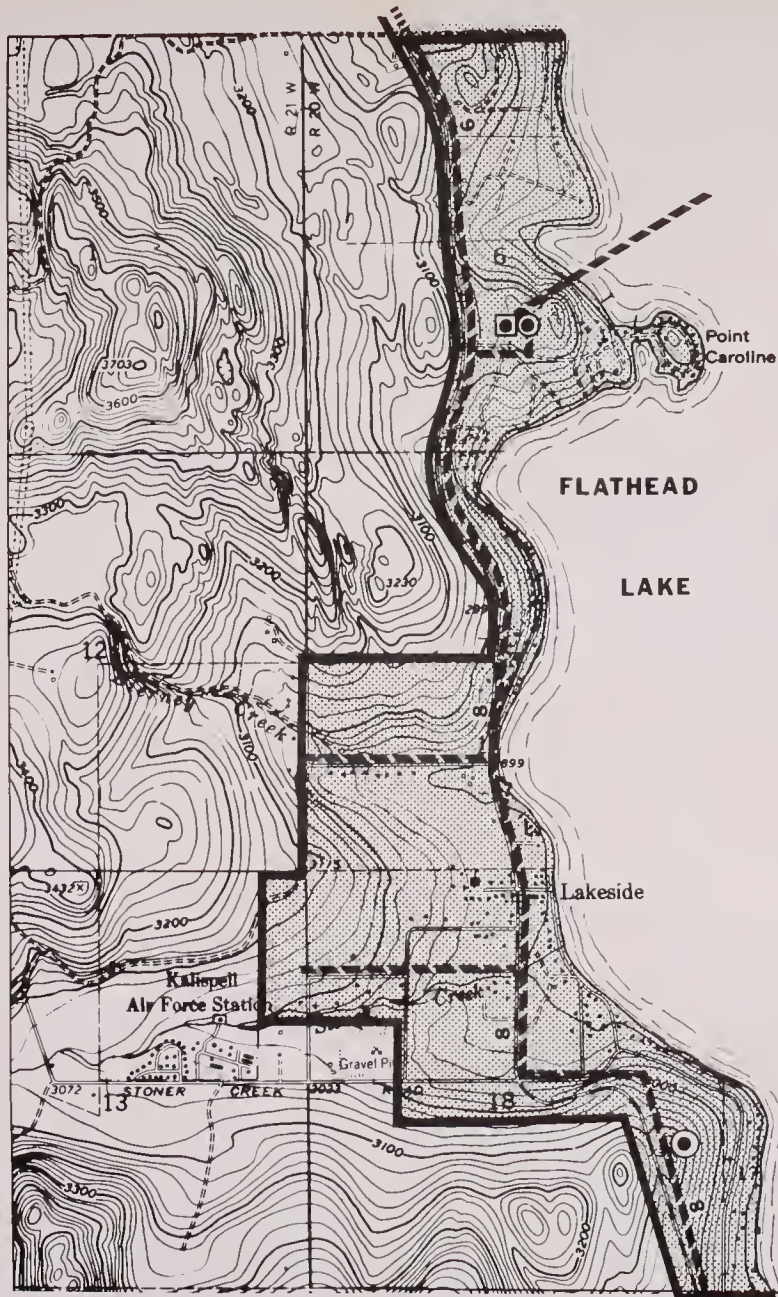


EXHIBIT NO. 20



FLATHEAD COUNTY MONTANA

LEGEND

EXISTING

	Service Area		Water Well or Booster Station
	Major Water Mains		Water Treatment Plant
	Water Reservoir		Water Storage Tank

PROPOSED

5 - 10YR. EST. NEEDS



10-20YR. EST. NEEDS



Service Area

Major Water Mains

Water Reservoir

Water Well or Booster Station

Water Treatment Plant

Water Storage Tank

LAKESIDE WATER SERVICE AREA

SCALE IN MILES

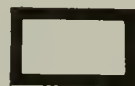




FLATHEAD COUNTY MONTANA

LEGEND

EXISTING



Service Area



Major Water Mains



Water Reservoir



Water Well or Booster
Station



Water Treatment
Plant



Water Storage
Tank

PROPOSED

5 - 10YR.
EST. NEEDS



10-20YR.
EST. NEEDS



Service Area

Major Water Mains

Water Reservoir

Water Well or Booster Station

Water Treatment Plant

Water Storage Tank

MARTIN CITY WATER SERVICE AREA

SCALE IN MILES

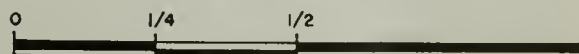


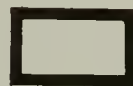
EXHIBIT NO. 21



FLATHEAD COUNTY MONTANA

LEGEND

EXISTING



Service Area



Major Water Mains



Water Reservoir



Water Well or Booster
Station



Water Treatment
Plant



Water Storage
Tank

PROPOSED

5 - 10YR. EST. NEEDS



10-20YR. EST. NEEDS



Service Area

Major Water Mains

Water Reservoir

Water Well or Booster Station

Water Treatment Plant

Water Storage Tank

MARTIN CITY WATER SERVICE AREA

SCALE IN MILES

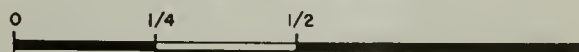


EXHIBIT NO. 21

FLATHEAD COUNTY MONTANA

LEGEND EXISTING

	Service Area		Water Well or Booster Station
	Major Water Mains		Water Treatment Plant
	Water Reservoir		Water Storage Tank

PROPOSED

5-10YR. EST. NEEDS



10-20YR. EST. NEEDS



Service Area

Major Water Mains

Water Reservoir

Water Well or Booster Station

Water Treatment Plant

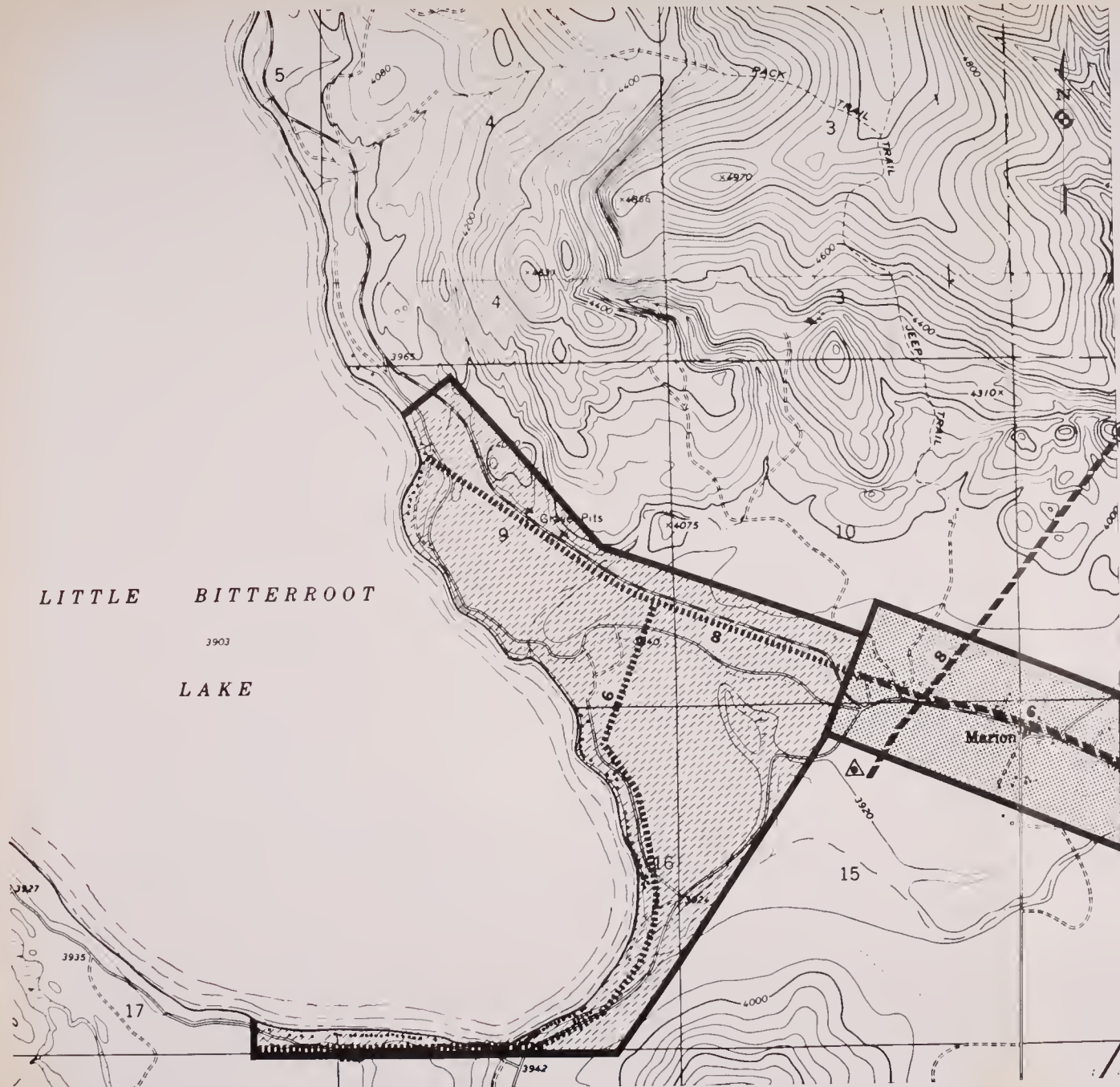
Water Storage Tank

MARION WATER SERVICE AREA

SCALE IN MILES



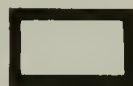
EXHIBIT NO. 20



FLATHEAD COUNTY MONTANA

LEGEND

EXISTING



Service Area



Major Water Mains



Water Reservoir



Water Well or Booster Station



Water Treatment Plant



Water Storage Tank

PROPOSED

S - 10YR.
EST. NEEDS



10-20YR.
EST. NEEDS



Service Area

Major Water Mains

Water Reservoir

Water Well or Booster Station

Water Treatment Plant

Water Storage Tank

MC GREGOR LAKE WATER SERVICE AREA

SCALE IN MILES

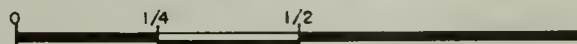
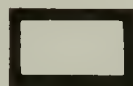


EXHIBIT NO. 22

FLATHEAD COUNTY MONTANA

LEGEND

EXISTING



Service Area



Major Water Mains



Water Reservoir



Water Well or Booster
Station



Water Treatment
Plant



Water Storage
Tank

PROPOSED

5 - 10YR. EST. NEEDS



10-20YR. EST. NEEDS



Service Area

Major Water Mains

Water Reservoir

Water Well or Booster Station

Water Treatment Plant

Water Storage Tank

MC GREGOR LAKE WATER SERVICE AREA

SCALE IN MILES

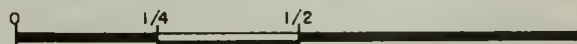


EXHIBIT NO. 22



FLATHEAD COUNTY MONTANA



LEGEND EXISTING

- | | | | |
|---|-------------------|---|-------------------------------|
|  | Service Area |  | Water Well or Booster Station |
|  | Major Water Mains |  | Water Treatment Plant |
|  | Water Reservoir |  | Water Storage Tank |

PROPOSED

5 - 10YR. EST. NEEDS



10-20YR. EST. NEEDS



- | |
|-------------------------------|
| Service Area |
| Major Water Mains |
| Water Reservoir |
| Water Well or Booster Station |
| Water Treatment Plant |
| Water Storage Tank |

MARTIN CITY WATER SERVICE AREA

SCALE IN MILES

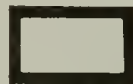




FLATHEAD COUNTY MONTANA

LEGEND

EXISTING



Service Area



Major Water Mains



Water Reservoir



Water Well or Booster
Station



Water Treatment
Plant



Water Storage
Tank

PROPOSED

5 - 10YR. EST. NEEDS



10-20YR. EST. NEEDS



Service Area

Major Water Mains

Water Reservoir

Water Well or Booster Station

Water Treatment Plant

Water Storage Tank

MOUNTAIN VIEW WATER SERVICE AREA

SCALE IN MILES

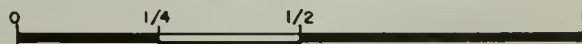


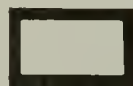
EXHIBIT NO. 23



FLATHEAD COUNTY MONTANA

LEGEND

EXISTING



Service Area



Major Water Mains



Water Reservoir



Water Well or Booster
Station



Water Treatment
Plant



Water Storage
Tank

PROPOSED

S - 10YR.
EST. NEEDS



10-20YR.
EST. NEEDS



Service Area

Major Water Mains

Water Reservoir

Water Well or Booster Station

Water Treatment Plant

Water Storage Tank

MOUNTAIN VIEW WATER SERVICE AREA

SCALE IN MILES

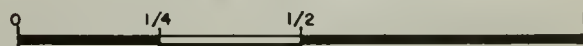
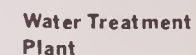


EXHIBIT NO. 23

EXISTING



— — — — Major Water Mains



**S - 10 YR.
EST. NEEDS**



**10-20YR.
EST. NEEDS**



Service Area

Major Water Mains

Water Reservoir

Water Well or Booster Station

Water Treatment Plant

Water Storage Tank

MC GREGOR LAKE WATER SERVICE AREA

SCALE IN MILES

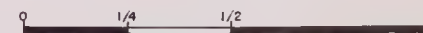
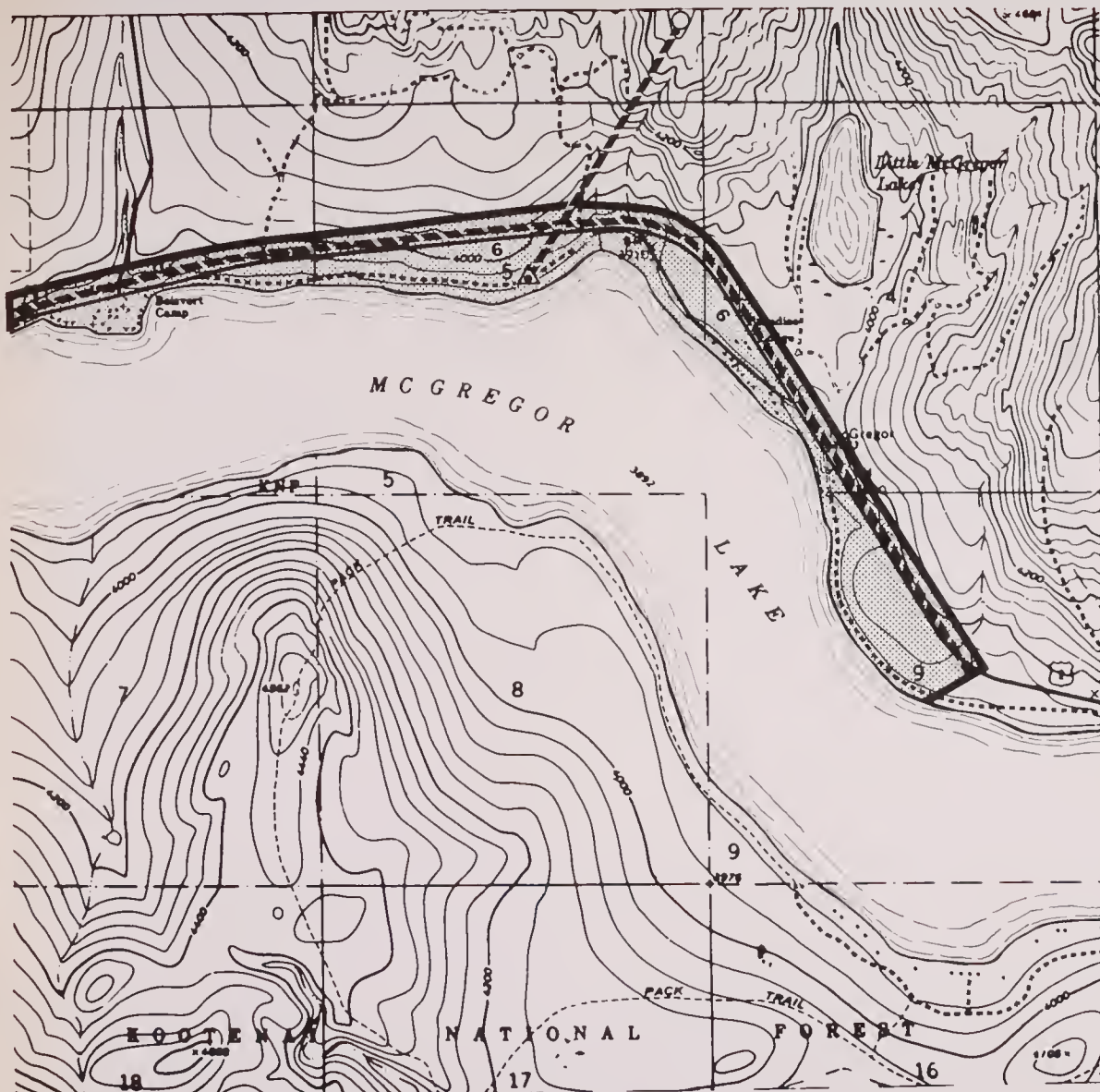


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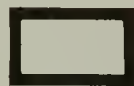




FLATHEAD COUNTY MONTANA

LEGEND

EXISTING



Service Area



Major Water Mains



Water Reservoir



Water Well or Booster
Station



Water Treatment
Plant



Water Storage
Tank

PROPOSED

5 - 10YR. EST. NEEDS



10-20YR. EST. NEEDS



Service Area

Major Water Mains

Water Reservoir

Water Well or Booster Station

Water Treatment Plant

Water Storage Tank

OLNEY WATER SERVICE AREA

SCALE IN MILES

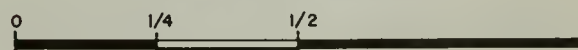


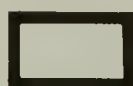
EXHIBIT NO. 24



FLATHEAD COUNTY MONTANA

LEGEND

EXISTING



Service Area



Major Water Mains



Water Reservoir



Water Well or Booster
Station



Water Treatment
Plant



Water Storage
Tank

PROPOSED

5 - 10YR. EST. NEEDS



10-20YR. EST. NEEDS



Service Area

Major Water Mains

Water Reservoir

Water Well or Booster Station

Water Treatment Plant

Water Storage Tank

OLNEY WATER SERVICE AREA

SCALE IN MILES

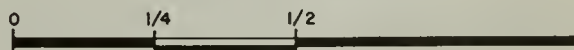
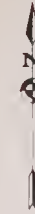
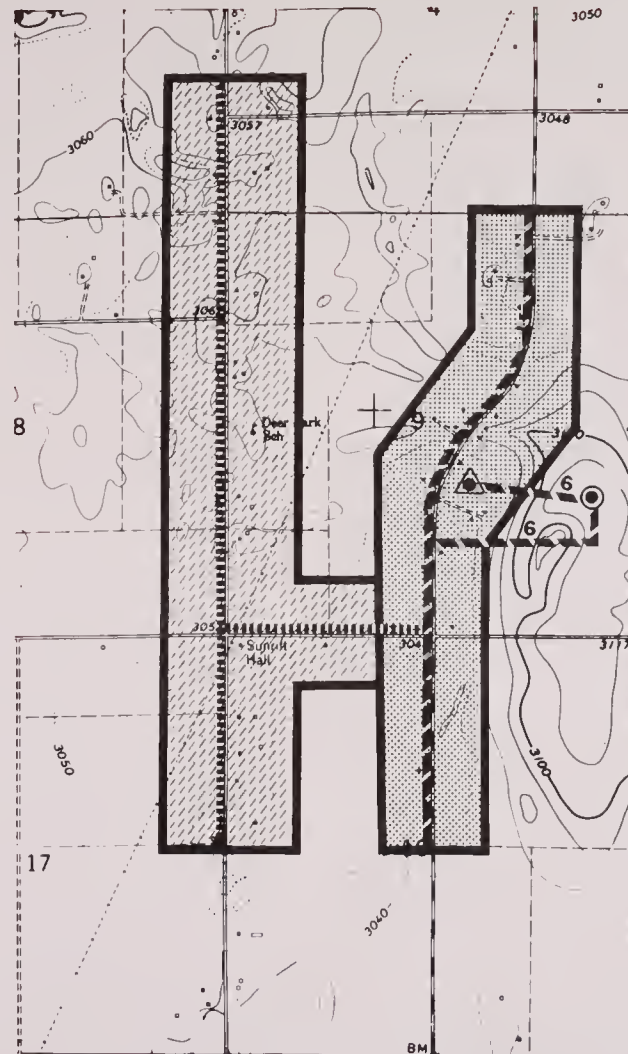


EXHIBIT NO. 24

FLATHEAD COUNTY MONTANA



LEGEND

EXISTING

	Service Area		Water Well or Booster Station
	Major Water Mains		Water Treatment Plant
	Water Reservoir		Water Storage Tank

PROPOSED

5 - 10YR. EST. NEEDS



10-20YR. EST. NEEDS



Service Area

Major Water Mains

Water Reservoir

Water Well or Booster Station

Water Treatment Plant

Water Storage Tank

MOUNTAIN VIEW WATER SERVICE AREA

SCALE IN MILES



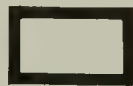
EXHIBIT NO. 23



FLATHEAD COUNTY MONTANA

LEGEND

EXISTING



Service Area



Major Water Mains



Water Reservoir



Water Well or Booster
Station



Water Treatment
Plant



Water Storage
Tank

PROPOSED

5 - 10YR. EST. NEEDS



10-20YR. EST. NEEDS



Service Area

Major Water Mains

Water Reservoir

Water Well or Booster Station

Water Treatment Plant

Water Storage Tank

SOMERS WATER SERVICE AREA

SCALE IN MILES

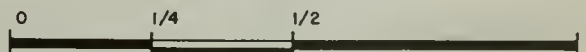


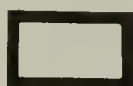
EXHIBIT NO. 25



FLATHEAD COUNTY MONTANA

LEGEND

EXISTING



Service Area



Major Water Mains



Water Reservoir



Water Well or Booster
Station



Water Treatment
Plant



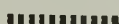
Water Storage
Tank

PROPOSED

5 - 10YR. EST. NEEDS



10-20YR. EST. NEEDS



Service Area

Major Water Mains

Water Reservoir

Water Well or Booster Station

Water Treatment Plant

Water Storage Tank

SOMERS WATER SERVICE AREA

SCALE IN MILES

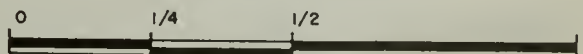


EXHIBIT NO. 25

EXISTING



Major Water Mains



Water Reservoir



7

C

Water Storage Tank

**5 - 10 YR.
EST. NEEDS**



**10-20 YR.
EST. NEEDS**



Major Water Mains

Water Reservoir

Water Well or Booster Station

Water Treatment Plant

Water Storage Tank

SCALE IN MILES

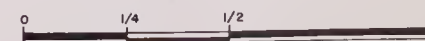


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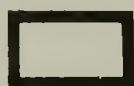




FLATHEAD COUNTY MONTANA

LEGEND

EXISTING



Service Area



Major Water Mains



Water Reservoir



Water Well or Booster
Station



Water Treatment
Plant



Water Storage
Tank

PROPOSED

5 - 10YR. EST. NEEDS



10-20YR. EST. NEEDS



Service Area

Major Water Mains

Water Reservoir

Water Well or Booster Station

Water Treatment Plant

Water Storage Tank

WEST GLACIER WATER SERVICE AREA

SCALE IN MILES

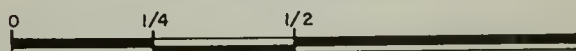


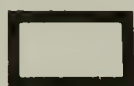
EXHIBIT NO. 26



FLATHEAD COUNTY MONTANA

LEGEND

EXISTING



Service Area



Major Water Mains



Water Reservoir



Water Well or Booster
Station



Water Treatment
Plant



Water Storage
Tank

PROPOSED

5 - 10YR.
EST. NEEDS



10-20YR.
EST. NEEDS



Service Area

Major Water Mains

Water Reservoir

Water Well or Booster Station

Water Treatment Plant

Water Storage Tank

WEST GLACIER WATER SERVICE AREA

SCALE IN MILES

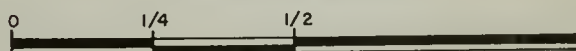
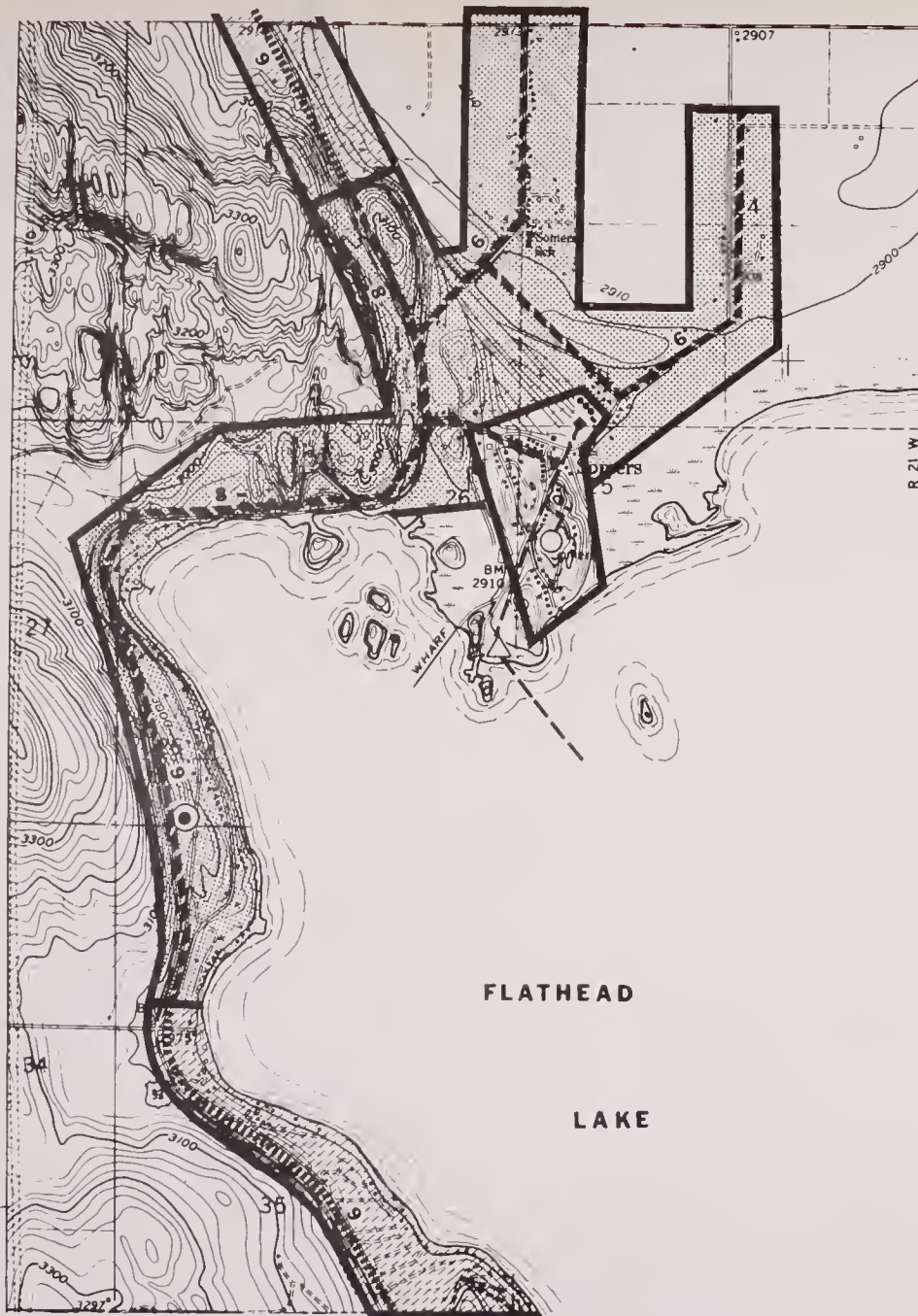


EXHIBIT NO. 26



FLATHEAD COUNTY MONTANA

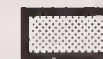
LEGEND

EXISTING

	Service Area		Water Well or Booster Station
	Major Water Mains		Water Treatment Plant
	Water Reservoir		Water Storage Tank

PROPOSED

5 - 10YR. EST. NEEDS



10-20YR. EST. NEEDS



SOMERS WATER SERVICE AREA

SCALE IN MILES



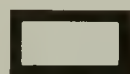
EXHIBIT NO. 25



FLATHEAD COUNTY MONTANA

LEGEND

EXISTING



Service Area



Interceptor & Outfall
Sewers



Sewage Pumping
Station



Sewage Treatment
Plant



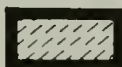
Sewage Treatment
Lagoon

PROPOSED

5 - 10YR. EST. NEEDS



10-20YR. EST. NEEDS



Service Area

Sewage Treatment Plant

Sewage Treatment Lagoon

Sewage Pumping Station

Interceptor & Outfall Sewers

WHITEFISH SEWER SERVICE AREA

SCALE IN MILES



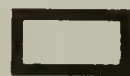
EXHIBIT NO. 27



FLATHEAD COUNTY MONTANA

LEGEND

EXISTING



Service Area



Interceptor & Outfall
Sewers



Sewage Pumping
Station



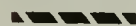
Sewage Treatment
Plant



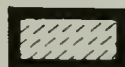
Sewage Treatment
Lagoon

PROPOSED

5 - 10YR. EST. NEEDS



10-20YR. EST. NEEDS



Service Area

Interceptor & Outfall Sewers

Sewage Treatment Plant

Sewage Treatment Lagoon

Sewage Pumping Station

WHITEFISH SEWER SERVICE AREA

SCALE IN MILES



EXHIBIT NO. 27

FLATHEAD COUNTY MONTANA



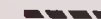
LEGEND

EXISTING

	Service Area		Water Well or Booster Station
	Major Water Mains		Water Treatment Plant
	Water Reservoir		Water Storage Tank

PROPOSED

5 - 10 YR. EST. NEEDS



10 - 20 YR. EST. NEEDS



Service Area

Major Water Mains

Water Reservoir

Water Well or Booster Station

Water Treatment Plant

Water Storage Tank

WEST GLACIER WATER SERVICE AREA

SCALE IN MILES

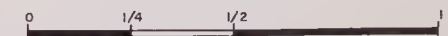


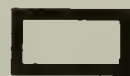
EXHIBIT NO. 26



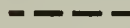
FLATHEAD COUNTY MONTANA

LEGEND

EXISTING



Service Area



Interceptor & Outfall
Sewers



Sewage Pumping
Station



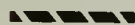
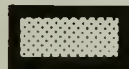
Sewage Treatment
Plant



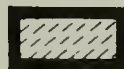
Sewage Treatment
Lagoon

PROPOSED

5 - 10YR. EST. NEEDS



10-20YR. EST. NEEDS



Service Area

Interceptor & Outfall Sewers

Sewage Treatment Plant

Sewage Treatment Lagoon

Sewage Pumping Station

COLUMBIA FALLS SEWER SERVICE AREA

SCALE IN MILES



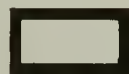
EXHIBIT NO. 28



FLATHEAD COUNTY MONTANA

LEGEND

EXISTING



Service Area



Sewage Treatment
Plant



Interceptor & Outfall
Sewers



Sewage Treatment
Lagoon



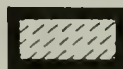
Sewage Pumping
Station

PROPOSED

5 - 10YR. EST. NEEDS



10 - 20YR. EST. NEEDS



Service Area

Interceptor & Outfall Sewers

Sewage Treatment Plant

Sewage Treatment Lagoon

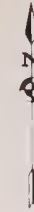
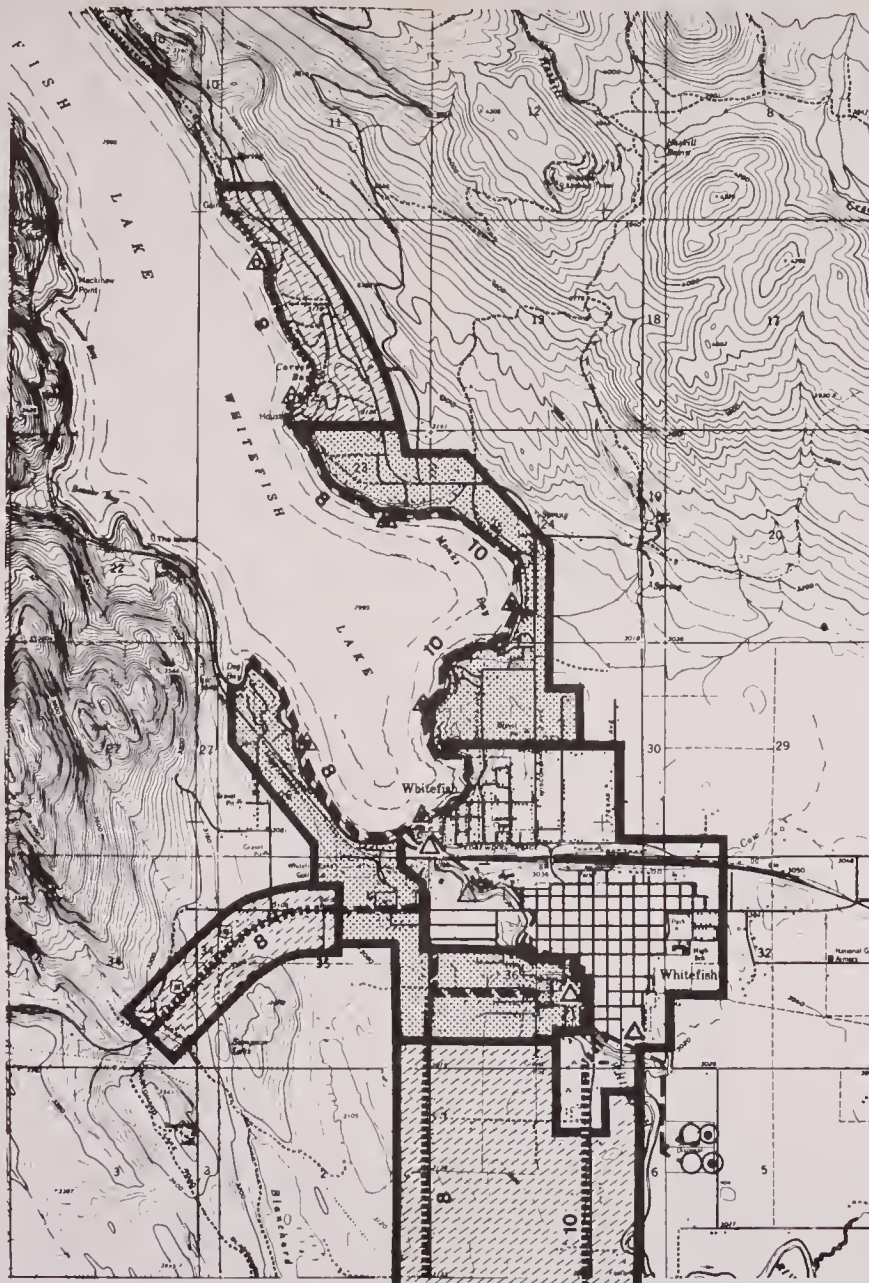
Sewage Pumping Station

COLUMBIA FALLS SEWER SERVICE AREA

SCALE IN MILES



EXHIBIT NO. 28



FLATHEAD COUNTY MONTANA

LEGEND

EXISTING

- | | | | |
|---|------------------------------|---|-------------------------|
|  | Service Area |  | Sewage Treatment Plant |
|  | Interceptor & Outfall Sewers |  | Sewage Treatment Lagoon |
|  | Sewage Pumping Station | | |

PROPOSED

5 - 10YR. EST. NEEDS

10-20YR. EST. NEEDS

- | | | |
|---|---|------------------------------|
|  |  | Service Area |
|  |  | Interceptor & Outfall Sewers |
|  |  | Sewage Treatment Plant |
|  |  | Sewage Treatment Lagoon |
|  |  | Sewage Pumping Station |

WHITEFISH SEWER SERVICE AREA

SCALE IN MILES



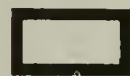
EXHIBIT NO. 27



FLATHEAD COUNTY MONTANA

LEGEND

EXISTING



Service Area



Interceptor & Outfall
Sewers



Sewage Pumping
Station



Sewage Treatment
Plant



Sewage Treatment
Lagoon

PROPOSED

5 - 10YR. EST. NEEDS



10-20YR. EST. NEEDS



Service Area

Sewage Treatment Plant

Sewage Treatment Lagoon

Sewage Pumping Station

BIG FORK SEWER SERVICE AREA

SCALE IN MILES



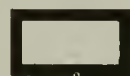
EXHIBIT NO. 29



FLATHEAD COUNTY MONTANA

LEGEND

EXISTING



Service Area



Sewage Treatment
Plant



Interceptor & Outfall
Sewers



Sewage Treatment
Lagoon



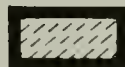
Sewage Pumping
Station

PROPOSED

5 - 10YR. EST. NEEDS



10-20YR. EST. NEEDS



Service Area

Interceptor & Outfall Sewers

Sewage Treatment Plant

Sewage Treatment Lagoon

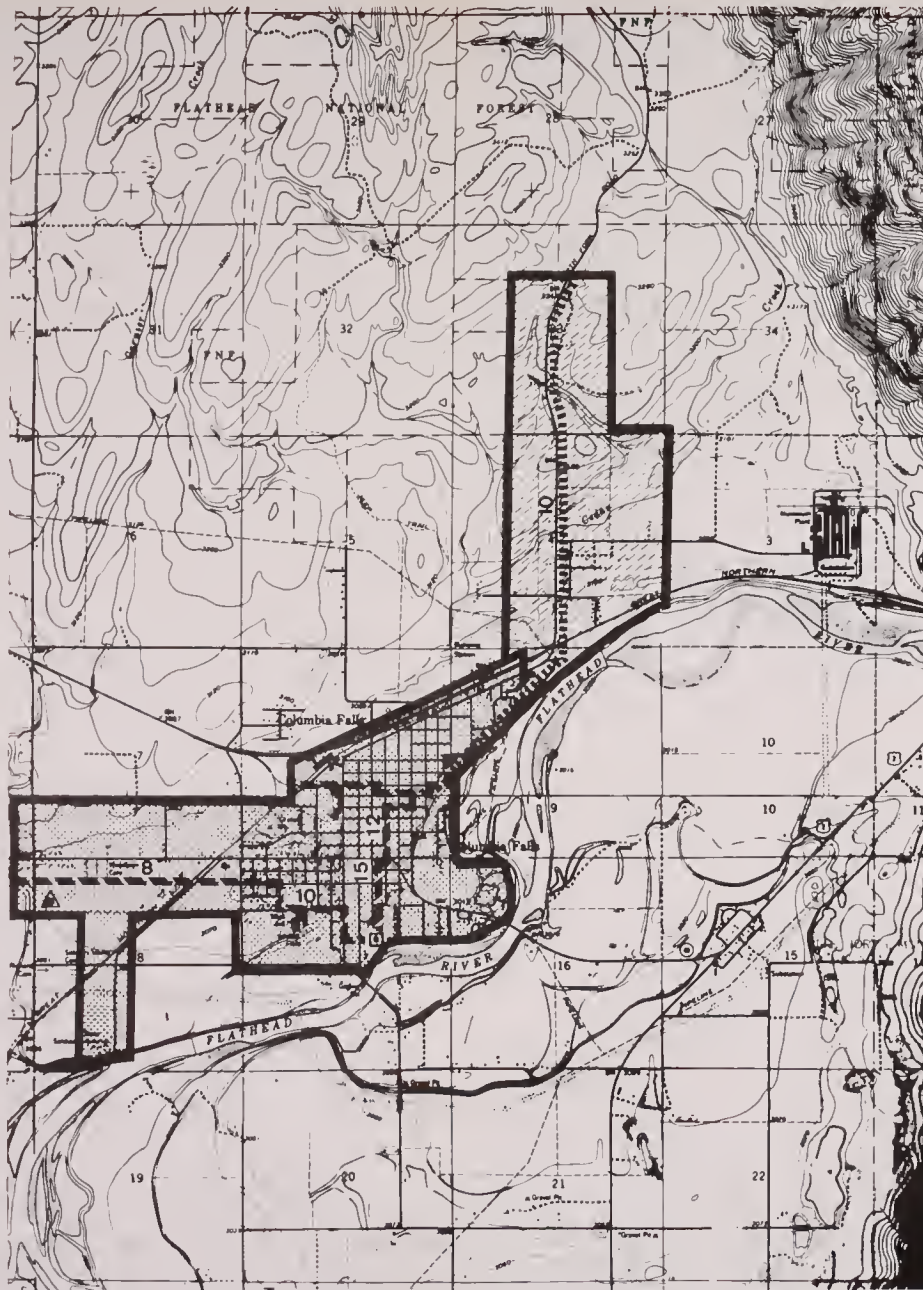
Sewage Pumping Station

BIG FORK SEWER SERVICE AREA

SCALE IN MILES



EXHIBIT NO. 29



FLATHEAD COUNTY MONTANA

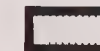
LEGEND

EXISTING

- | | | | |
|---|------------------------------|---|-------------------------|
|  | Service Area |  | Sewage Treatment Plant |
|  | Interceptor & Outfall Sewers |  | Sewage Treatment Lagoon |
|  | Sewage Pumping Station | | |

PROPOSED

5 - 10YR. EST. NEEDS



10 - 20YR. EST. NEEDS



Service Area

Interceptor & Outfall Sewers

Sewage Treatment Plant

Sewage Treatment Lagoon

Sewage Pumping Station

COLUMBIA FALLS SEWER SERVICE AREA

SCALE IN MILES



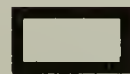
EXHIBIT NO. 28



FLATHEAD COUNTY MONTANA

LEGEND

EXISTING



Service Area



Sewage Treatment
Plant



Interceptor & Outfall
Sewers



Sewage Treatment
Lagoon



Sewage Pumping
Station

PROPOSED

5 - 10YR. EST. NEEDS



10-20YR. EST. NEEDS



Service Area

Interceptor & Outfall Sewers

Sewage Treatment Plant

Sewage Treatment Lagoon

Sewage Pumping Station

COLUMBIA HEIGHTS SEWER SERVICE AREA

SCALE IN MILES

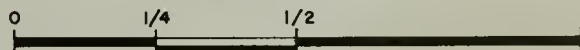


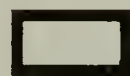
EXHIBIT NO. 30



FLATHEAD COUNTY MONTANA

LEGEND

EXISTING



Service Area



Sewage Treatment
Plant



Interceptor & Outfall
Sewers



Sewage Treatment
Lagoon



Sewage Pumping
Station

PROPOSED

5 - 10YR. EST. NEEDS



10-20YR. EST. NEEDS



Service Area

Interceptor & Outfall Sewers

Sewage Treatment Plant

Sewage Treatment Lagoon

Sewage Pumping Station

COLUMBIA HEIGHTS SEWER SERVICE AREA

SCALE IN MILES

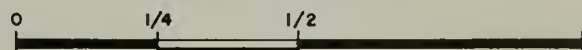


EXHIBIT NO. 30

FLATHEAD COUNTY MONTANA

LEGEND

EXISTING

- | | | | |
|---|------------------------------|---|-------------------------|
|  | Service Area |  | Sewage Treatment Plant |
|  | Interceptor & Outfall Sewers |  | Sewage Treatment Lagoon |
|  | Sewage Pumping Station | | |

PROPOSED

5 - 10YR. EST. NEEDS

10 - 20YR. EST. NEEDS

- | | | |
|---|---|------------------------------|
|  |  | Service Area |
|  |  | Interceptor & Outfall Sewers |
|  |  | Sewage Treatment Plant |
|  |  | Sewage Treatment Lagoon |
|  |  | Sewage Pumping Station |



BIG FORK SEWER SERVICE AREA

SCALE IN MILES



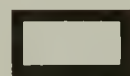
EXHIBIT NO. 29



FLATHEAD COUNTY MONTANA

LEGEND

EXISTING



Service Area



Sewage Treatment
Plant



Interceptor & Outfall
Sewers



Sewage Treatment
Lagoon



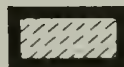
Sewage Pumping
Station

PROPOSED

5 - 10YR. EST. NEEDS



10-20YR. EST. NEEDS



Service Area

Interceptor & Outfall Sewers

Sewage Treatment Plant

Sewage Treatment Lagoon

Sewage Pumping Station

CORAM SEWER SERVICE AREA

SCALE IN MILES



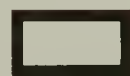
EXHIBIT NO. 31



FLATHEAD COUNTY MONTANA

LEGEND

EXISTING



Service Area



Sewage Treatment
Plant



Interceptor & Outfall
Sewers



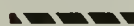
Sewage Treatment
Lagoon



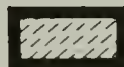
Sewage Pumping
Station

PROPOSED

5 - 10YR. EST. NEEDS



10-20YR. EST. NEEDS



Service Area

Interceptor & Outfall Sewers

Sewage Treatment Plant

Sewage Treatment Lagoon

Sewage Pumping Station

CORAM SEWER SERVICE AREA

SCALE IN MILES

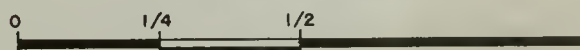
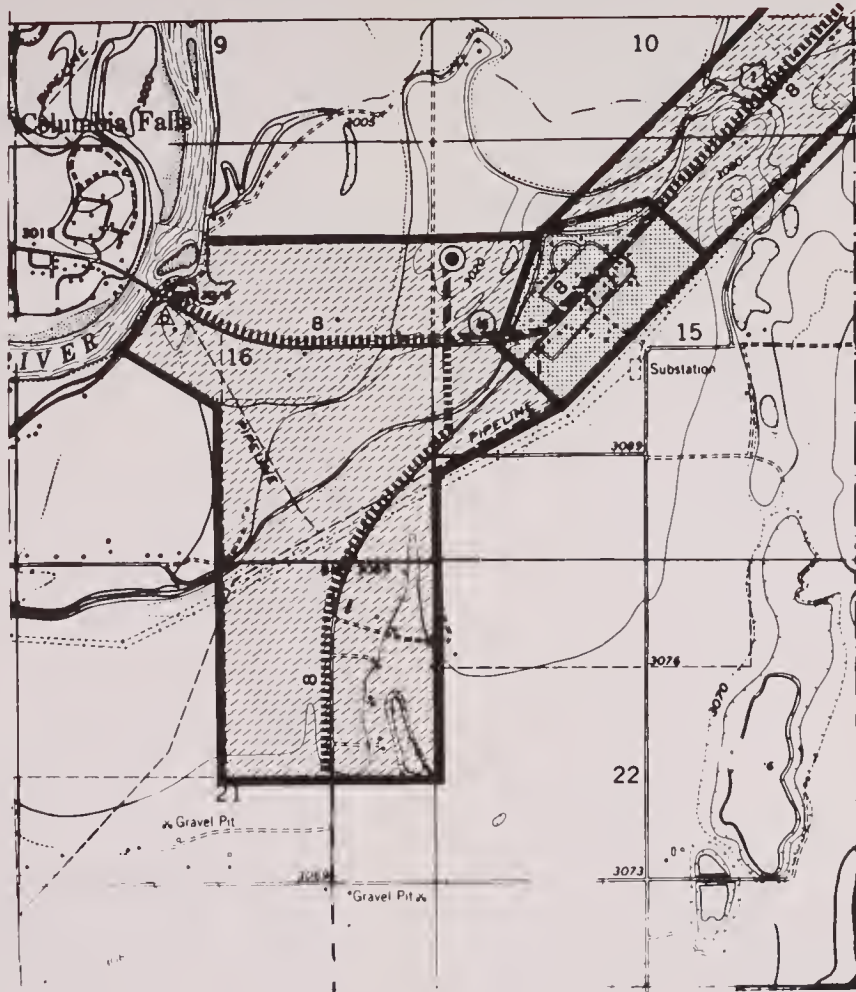


EXHIBIT NO. 31

FLATHEAD COUNTY MONTANA



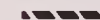
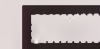
LEGEND

EXISTING

- | | | | |
|---|------------------------------|---|-------------------------|
|  | Service Area |  | Sewage Treatment Plant |
|  | Interceptor & Outfall Sewers |  | Sewage Treatment Lagoon |
|  | Sewage Pumping Station | | |

PROPOSED

5 - 10YR. EST. NEEDS



10 - 20YR. EST. NEEDS



COLUMBIA HEIGHTS SEWER SERVICE AREA

SCALE IN MILES



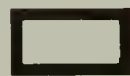
EXHIBIT NO. 30



FLATHEAD COUNTY MONTANA

LEGEND

EXISTING



Service Area



Sewage Treatment
Plant



Interceptor & Outfall
Sewers



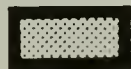
Sewage Treatment
Lagoon



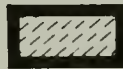
Sewage Pumping
Station

PROPOSED

5 - 10YR. EST. NEEDS



10-20YR. EST. NEEDS



Service Area

Interceptor & Outfall Sewers

Sewage Treatment Plant

Sewage Treatment Lagoon

Sewage Pumping Station

ESSEX SEWER SERVICE AREA

SCALE IN MILES

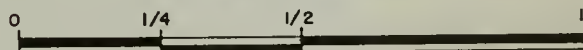


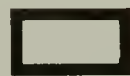
EXHIBIT NO. 32



FLATHEAD COUNTY MONTANA

LEGEND

EXISTING



Service Area



Sewage Treatment
Plant



Interceptor & Outfall
Sewers



Sewage Treatment
Lagoon



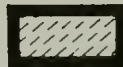
Sewage Pumping
Station

PROPOSED

5 - 10YR. EST. NEEDS



10-20YR. EST. NEEDS



Service Area

Interceptor & Outfall Sewers

Sewage Treatment Plant

Sewage Treatment Lagoon

Sewage Pumping Station

ESSEX SEWER SERVICE AREA

SCALE IN MILES

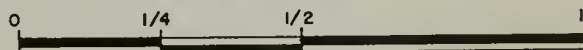
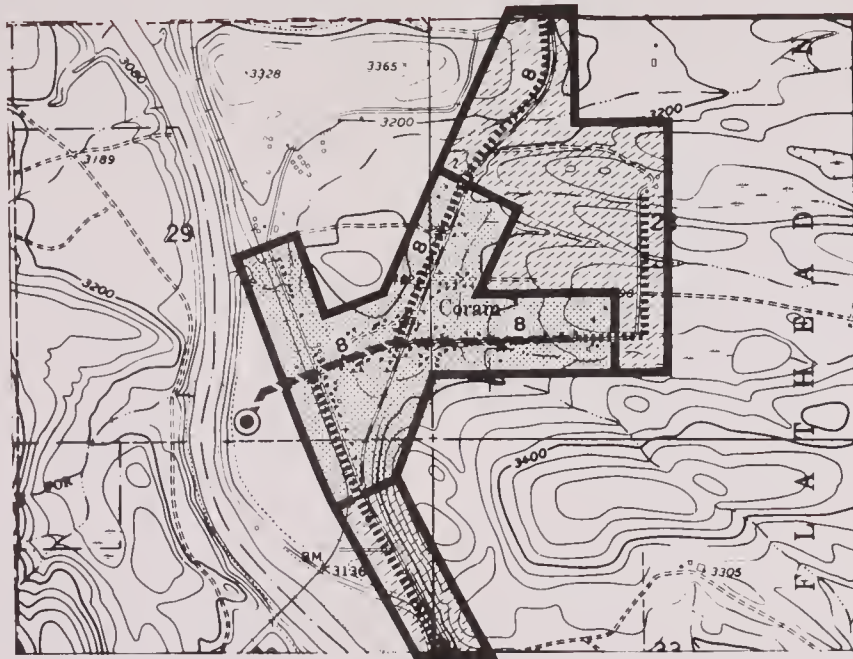


EXHIBIT NO. 32

FLATHEAD COUNTY MONTANA



LEGEND

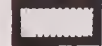
EXISTING

- | | | | |
|---|------------------------------|---|-------------------------|
|  | Service Area |  | Sewage Treatment Plant |
|  | Interceptor & Outfall Sewers |  | Sewage Treatment Lagoon |
|  | Sewage Pumping Station | | |

PROPOSED

5 - 10YR. EST. NEEDS

10 - 20YR. EST. NEEDS

- | | | | |
|---|------------------------------|---|------------------------------|
|  | Service Area |  | Service Area |
|  | Interceptor & Outfall Sewers |  | Interceptor & Outfall Sewers |
|  | Sewage Treatment Plant |  | Sewage Treatment Plant |
|  | Sewage Treatment Lagoon |  | Sewage Treatment Lagoon |
|  | Sewage Pumping Station |  | Sewage Pumping Station |

CORAM SEWER SERVICE AREA

SCALE IN MILES



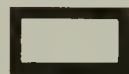
EXHIBIT NO. 31



FLATHEAD COUNTY MONTANA

LEGEND

EXISTING



Service Area



Interceptor & Outfall
Sewers



Sewage Pumping
Station



Sewage Treatment
Plant



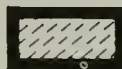
Sewage Treatment
Lagoon

PROPOSED

5 - 10YR.
EST. NEEDS



10-20YR.
EST. NEEDS



Service Area

Interceptor & Outfall Sewers

Sewage Treatment Plant

Sewage Treatment Lagoon

Sewage Pumping Station

HALFMOON SEWER SERVICE AREA

SCALE IN MILES

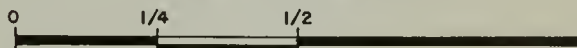


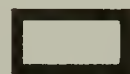
EXHIBIT NO. 33



FLATHEAD COUNTY MONTANA

LEGEND

EXISTING



Service Area



Interceptor & Outfall
Sewers



Sewage Pumping
Station



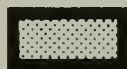
Sewage Treatment
Plant



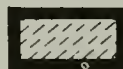
Sewage Treatment
Lagoon

PROPOSED

5 - 10YR.
EST. NEEDS



10-20YR.
EST. NEEDS



Service Area

Interceptor & Outfall Sewers

Sewage Treatment Plant

Sewage Treatment Lagoon

Sewage Pumping Station

HALFMOON SEWER SERVICE AREA

SCALE IN MILES

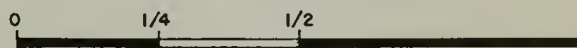


EXHIBIT NO. 33

FLATHEAD COUNTY MONTANA

LEGEND

EXISTING

- | | | | |
|---|------------------------------|---|-------------------------|
|  | Service Area |  | Sewage Treatment Plant |
|  | Interceptor & Outfall Sewers |  | Sewage Treatment Lagoon |
|  | Sewage Pumping Station | | |

PROPOSED

S - 10YR. EST. NEEDS

10-20YR. EST. NEEDS

- | | | |
|---|---|------------------------------|
|  |  | Service Area |
|  |  | Interceptor & Outfall Sewers |
|  |  | Sewage Treatment Plant |
|  |  | Sewage Treatment Lagoon |
|  |  | Sewage Pumping Station |

ESSEX SEWER SERVICE AREA

SCALE IN MILES

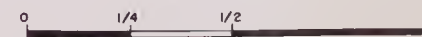
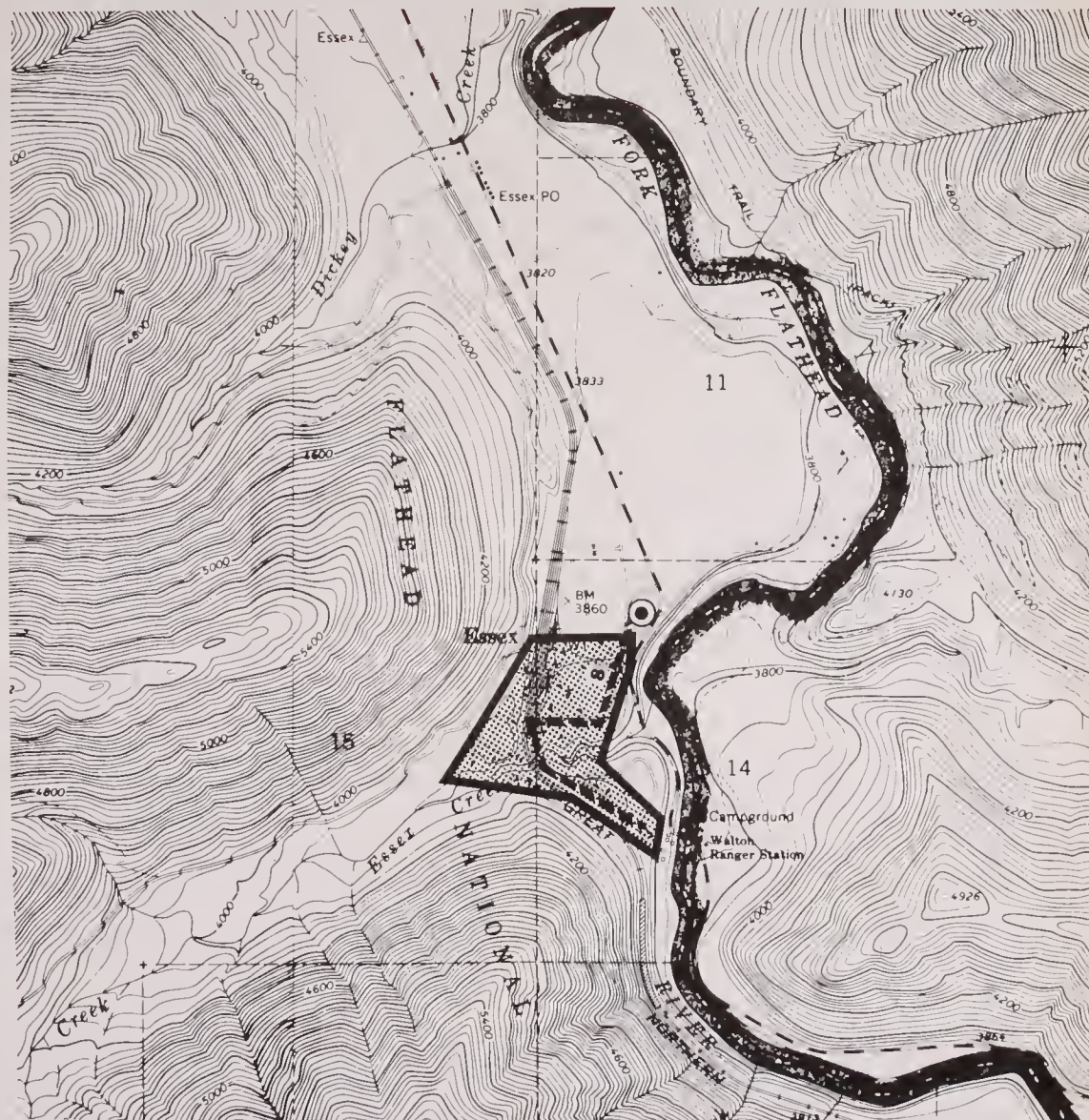


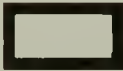
EXHIBIT NO. 32



FLATHEAD COUNTY MONTANA

LEGEND

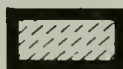
EXISTING

	Service Area		Sewage Treatment Plant
	Interceptor & Outfall Sewers		Sewage Treatment Lagoon
	Sewage Pumping Station		

PROPOSED

5 - 10YR. EST. NEEDS

10-20YR. EST. NEEDS



Service Area



Interceptor & Outfall Sewers



Sewage Treatment Plant



Sewage Treatment Lagoon



Sewage Pumping Station

HUNGRY HORSE SEWER SERVICE AREA

SCALE IN MILES

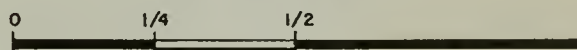
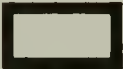


EXHIBIT NO. 34

FLATHEAD COUNTY MONTANA

LEGEND

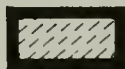
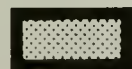
EXISTING

	Service Area		Sewage Treatment Plant
	Interceptor & Outfall Sewers		Sewage Treatment Lagoon
	Sewage Pumping Station		

PROPOSED

5 - 10YR. EST. NEEDS

10-20YR. EST. NEEDS



Service Area



Interceptor & Outfall Sewers



Sewage Treatment Plant



Sewage Treatment Lagoon



Sewage Pumping Station

HUNGRY HORSE SEWER SERVICE AREA

SCALE IN MILES

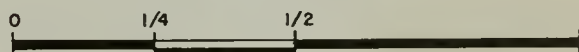


EXHIBIT NO. 34

FLATHEAD COUNTY MONTANA



LEGEND

EXISTING

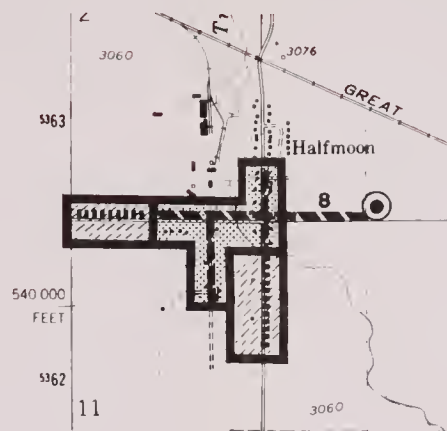
- | | | | |
|---|------------------------------|---|-------------------------|
|  | Service Area |  | Sewage Treatment Plant |
|  | Interceptor & Outfall Sewers |  | Sewage Treatment Lagoon |
|  | Sewage Pumping Station | | |

PROPOSED

S - 10YR. EST. NEEDS

10-20YR. EST. NEEDS

- | | | |
|---|---|------------------------------|
|  |  | Service Area |
|  |  | Interceptor & Outfall Sewers |
|  |  | Sewage Treatment Plant |
|  |  | Sewage Treatment Lagoon |
|  |  | Sewage Pumping Station |



HALFMOON SEWER SERVICE AREA

SCALE IN MILES



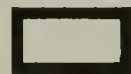
EXHIBIT NO. 33



FLATHEAD COUNTY MONTANA

LEGEND

EXISTING



Service Area



Sewage Treatment
Plant



Interceptor & Outfall
Sewers



Sewage Treatment
Lagoon

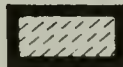


Sewage Pumping
Station

PROPOSED

5 - 10YR.
EST. NEEDS

10-20YR.
EST. NEEDS



Service Area



Interceptor & Outfall Sewers



Sewage Treatment Plant



Sewage Treatment Lagoon



Sewage Pumping Station

KILA SEWER SERVICE AREA

SCALE IN MILES

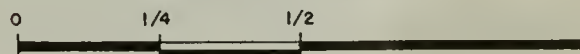


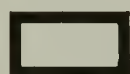
EXHIBIT NO. 35



FLATHEAD COUNTY MONTANA

LEGEND

EXISTING



Service Area



Sewage Treatment
Plant



Interceptor & Outfall
Sewers



Sewage Treatment
Lagoon



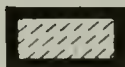
Sewage Pumping
Station

PROPOSED

5 - 10YR. EST. NEEDS



10-20YR. EST. NEEDS



Service Area



Interceptor & Outfall Sewers



Sewage Treatment Plant



Sewage Treatment Lagoon



Sewage Pumping Station

KILA SEWER SERVICE AREA

SCALE IN MILES

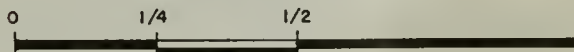
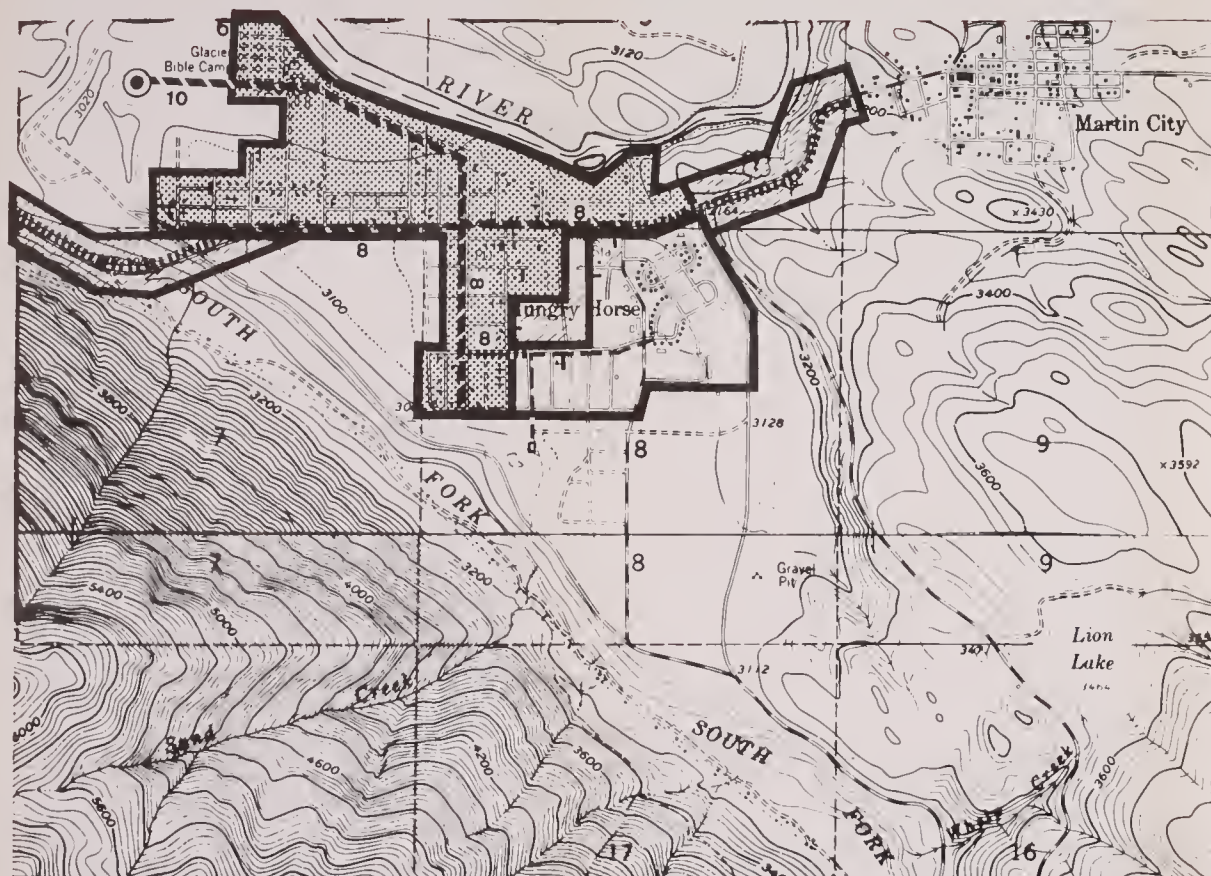


EXHIBIT NO. 35

FLATHEAD COUNTY MONTANA



LEGEND EXISTING

- | | | | |
|---|------------------------------|---|-------------------------|
|  | Service Area |  | Sewage Treatment Plant |
|  | Interceptor & Outfall Sewers |  | Sewage Treatment Lagoon |
|  | Sewage Pumping Station | | |

PROPOSED

5 - 10YR.
EST. NEEDS

10 - 20YR.
EST. NEEDS

- | | | | |
|---|------------------------------|---|------------------------------|
|  | Service Area |  | Service Area |
|  | Interceptor & Outfall Sewers |  | Interceptor & Outfall Sewers |
|  | Sewage Treatment Plant |  | Sewage Treatment Plant |
|  | Sewage Treatment Lagoon |  | Sewage Treatment Lagoon |
|  | Sewage Pumping Station |  | Sewage Pumping Station |

HUNGRY HORSE SEWER SERVICE AREA

SCALE IN MILES



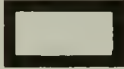
EXHIBIT NO. 34



FLATHEAD COUNTY MONTANA

LEGEND

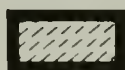
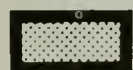
EXISTING

	Service Area		Sewage Treatment Plant
	Interceptor & Outfall Sewers		Sewage Treatment Lagoon
	Sewage Pumping Station		

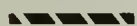
PROPOSED

5 - 10YR. EST. NEEDS

10-20YR. EST. NEEDS



Service Area



Interceptor & Outfall Sewers



Sewage Treatment Plant



Sewage Treatment Lagoon



Sewage Pumping Station

LAKE BLAINE SEWER SERVICE AREA

SCALE IN MILES

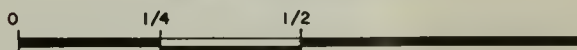


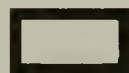
EXHIBIT NO. 36



FLATHEAD COUNTY MONTANA

LEGEND

EXISTING



Service Area



Sewage Treatment
Plant



Interceptor & Outfall
Sewers



Sewage Treatment
Lagoon



Sewage Pumping
Station

PROPOSED

5 - 10YR.
EST. NEEDS

10-20YR.
EST. NEEDS



Service Area



Interceptor & Outfall Sewers



Sewage Treatment Plant



Sewage Treatment Lagoon



Sewage Pumping Station

LAKE BLAINE SEWER SERVICE AREA

SCALE IN MILES

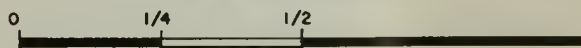
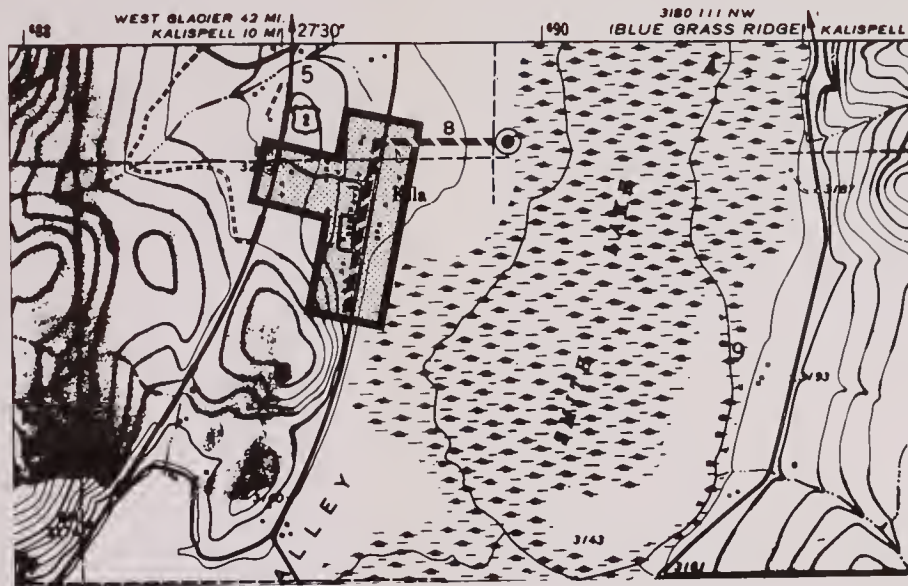
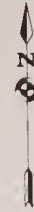


EXHIBIT NO. 36

FLATHEAD COUNTY MONTANA



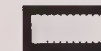
LEGEND

EXISTING

-  Service Area
-  Interceptor & Outfall Sewers
-  Sewage Pumping Station
-  Sewage Treatment Plant
-  Sewage Treatment Lagoon

PROPOSED

5 - 10YR. EST. NEEDS



10-20YR. EST. NEEDS



Service Area

Interceptor & Outfall Sewers

Sewage Treatment Plant

Sewage Treatment Lagoon

Sewage Pumping Station

KILA SEWER SERVICE AREA

SCALE IN MILES

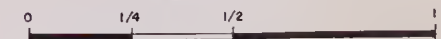


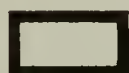
EXHIBIT NO. 35



FLATHEAD COUNTY MONTANA

LEGEND

EXISTING



Service Area



Sewage Treatment
Plant



Sewage Treatment
Lagoon



Interceptor & Outfall
Sewers



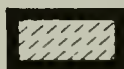
Sewage Pumping
Station

PROPOSED

5 - 10YR. EST. NEEDS



10-20YR. EST. NEEDS



Service Area



Interceptor & Outfall Sewers



Sewage Treatment Plant



Sewage Treatment Lagoon



Sewage Pumping Station

LAKESIDE SEWER SERVICE AREA

SCALE IN MILES

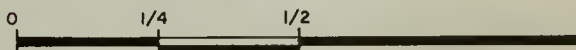
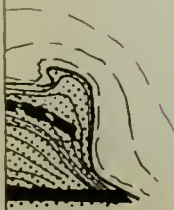


EXHIBIT NO. 37

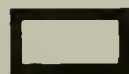




FLATHEAD COUNTY MONTANA

LEGEND

EXISTING



Service Area



Interceptor & Outfall
Sewers



Sewage Pumping
Station



Sewage Treatment
Plant



Sewage Treatment
Lagoon

PROPOSED

5 - 10YR. EST. NEEDS



10-20YR. EST. NEEDS



Service Area

Interceptor & Outfall Sewers

Sewage Treatment Plant

Sewage Treatment Lagoon

Sewage Pumping Station

LAKESIDE SEWER SERVICE AREA

SCALE IN MILES

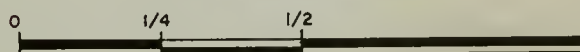


EXHIBIT NO. 37



FLATHEAD COUNTY MONTANA

LEGEND

EXISTING

-  Service Area
-  Interceptor & Outfall Sewers
-  Sewage Pumping Station
-  Sewage Treatment Plant
-  Sewage Treatment Lagoon

PROPOSED

S - 10YR. EST. NEEDS



10-20YR. EST. NEEDS



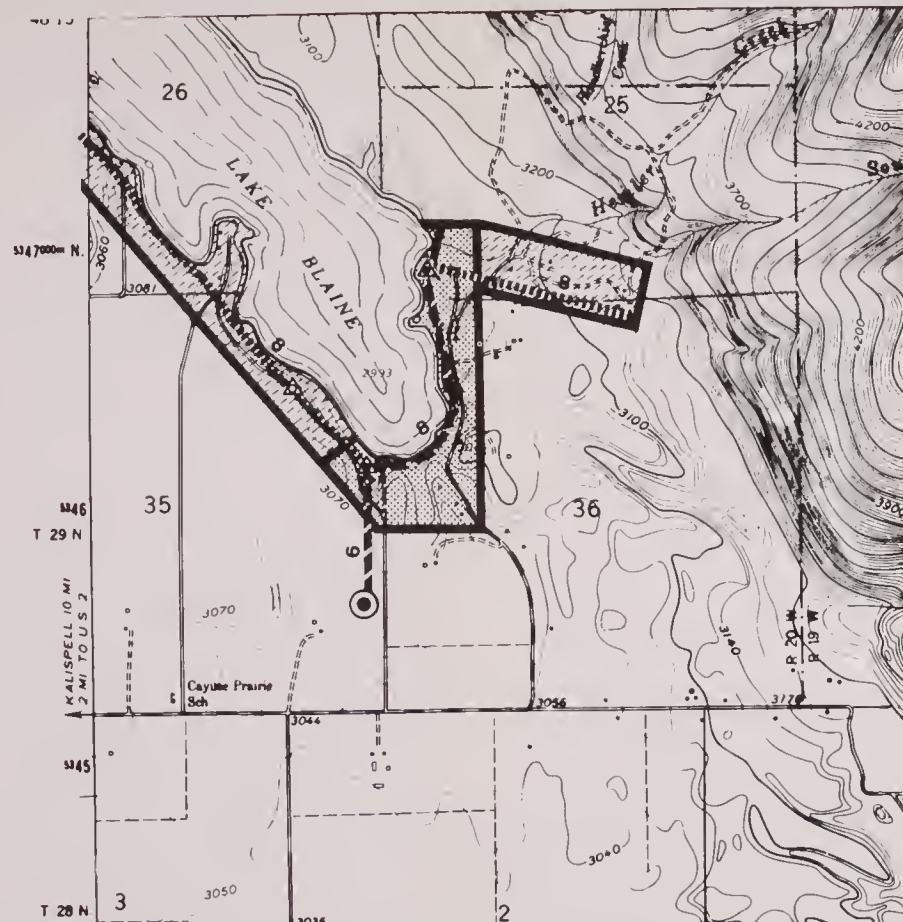
Service Area

Interceptor & Outfall Sewers

Sewage Treatment Plant

Sewage Treatment Lagoon

Sewage Pumping Station



LAKE BLAINE SEWER SERVICE AREA

SCALE IN MILES

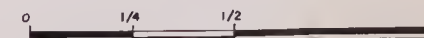
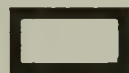


EXHIBIT NO. 36

FLATHEAD COUNTY MONTANA

LEGEND

EXISTING



Service Area



Interceptor & Outfall
Sewers



Sewage Pumping
Station



Sewage Treatment
Plant



Sewage Treatment
Lagoon

PROPOSED

5 - 10YR.
EST. NEEDS



10-20YR.
EST. NEEDS



Service Area



Interceptor & Outfall Sewers



Sewage Treatment Plant



Sewage Treatment Lagoon



Sewage Pumping Station

MARION SEWER SERVICE AREA

SCALE IN MILES

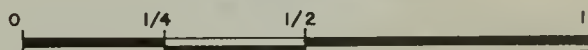
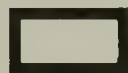


EXHIBIT NO. 38

FLATHEAD COUNTY MONTANA

LEGEND

EXISTING



Service Area



Interceptor & Outfall
Sewers



Sewage Pumping
Station



Sewage Treatment
Plant



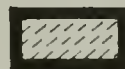
Sewage Treatment
Lagoon

PROPOSED

5 - 10YR.
EST. NEEDS



10-20YR.
EST. NEEDS



Service Area



Interceptor & Outfall Sewers



Sewage Treatment Plant



Sewage Treatment Lagoon



Sewage Pumping Station

MARION SEWER SERVICE AREA

SCALE IN MILES

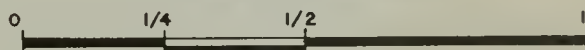


EXHIBIT NO. 38

FLATHEAD COUNTY MONTANA

LEGEND

EXISTING

- | | | | |
|---|------------------------------|---|-------------------------|
|  | Service Area |  | Sewage Treatment Plant |
|  | Interceptor & Outfall Sewers |  | Sewage Treatment Lagoon |
|  | Sewage Pumping Station | | |

PROPOSED

5 - 10YR. EST. NEEDS

10 - 20YR. EST. NEEDS

- | | | |
|---|---|------------------------------|
|  |  | Service Area |
|  |  | Interceptor & Outfall Sewers |
|  |  | Sewage Treatment Plant |
|  |  | Sewage Treatment Lagoon |
|  |  | Sewage Pumping Station |

LAKESIDE SEWER SERVICE AREA

SCALE IN MILES

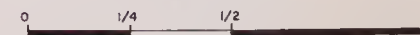
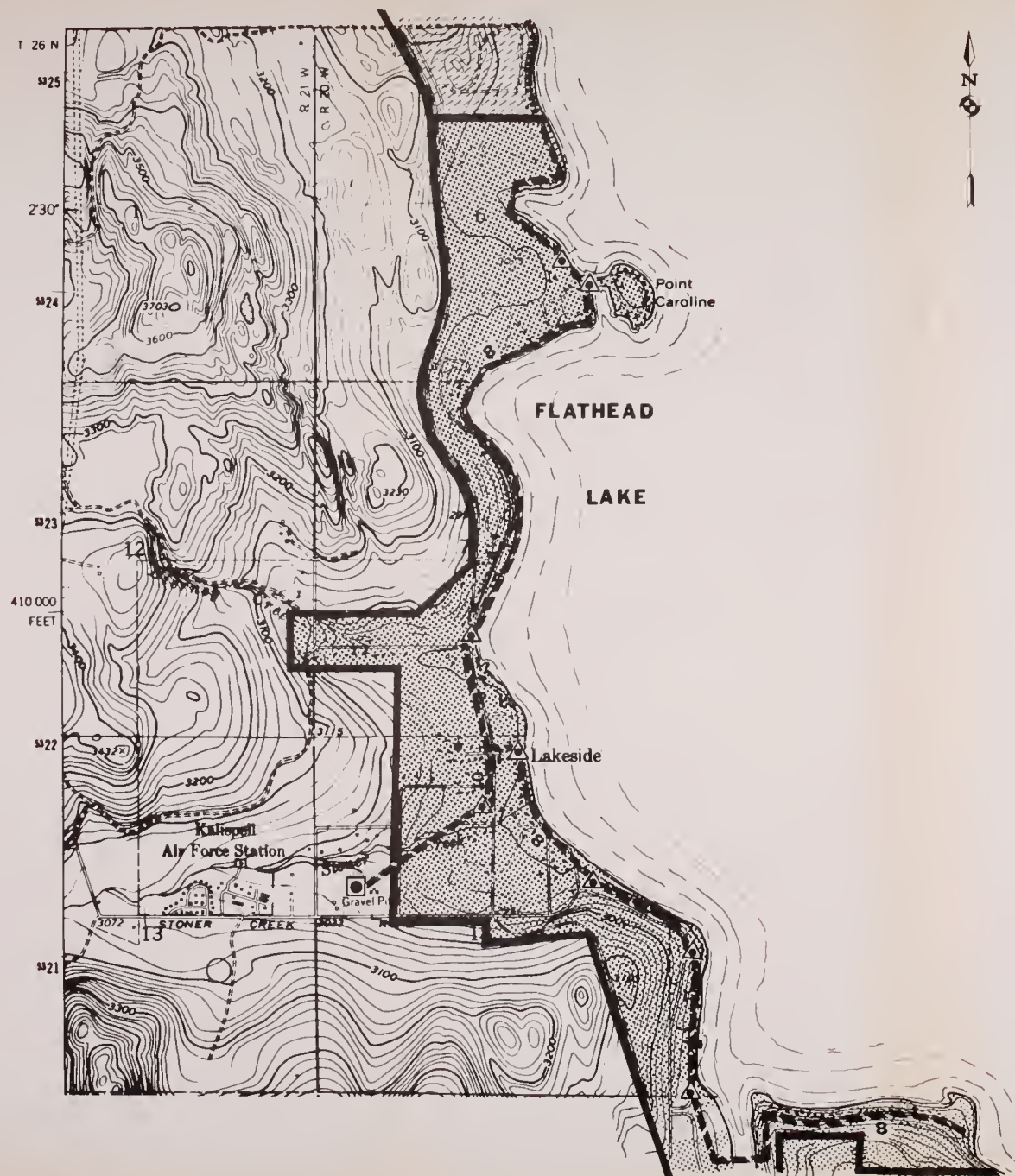


EXHIBIT NO. 37

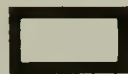




FLATHEAD COUNTY MONTANA

LEGEND

EXISTING



Service Area



Sewage Treatment
Plant



Interceptor & Outfall
Sewers



Sewage Treatment
Lagoon

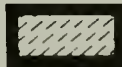


Sewage Pumping
Station

PROPOSED

**5 - 10YR.
EST. NEEDS**

**10-20YR.
EST. NEEDS**



Service Area



Interceptor & Outfall Sewers



Sewage Treatment Plant



Sewage Treatment Lagoon



Sewage Pumping Station

MARTIN CITY SEWER SERVICE AREA

SCALE IN MILES

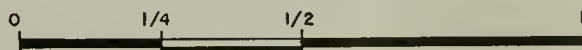


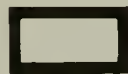
EXHIBIT NO. 39



FLATHEAD COUNTY MONTANA

LEGEND

EXISTING



Service Area



Sewage Treatment
Plant



Interceptor & Outfall
Sewers



Sewage Treatment
Lagoon

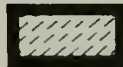


Sewage Pumping
Station

PROPOSED

**5 - 10YR.
EST. NEEDS**

**10-20YR.
EST. NEEDS**



Service Area



Interceptor & Outfall Sewers



Sewage Treatment Plant



Sewage Treatment Lagoon



Sewage Pumping Station

MARTIN CITY SEWER SERVICE AREA

SCALE IN MILES

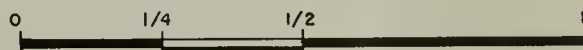
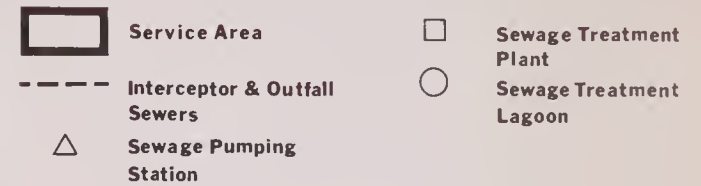


EXHIBIT NO. 39

FLATHEAD COUNTY MONTANA

LEGEND EXISTING



PROPOSED

5 - 10YR. EST. NEEDS



10-20YR. EST. NEEDS



Service Area

Interceptor & Outfall Sewers

Sewage Treatment Plant

Sewage Treatment Lagoon

Sewage Pumping Station

MARION SEWER SERVICE AREA

SCALE IN MILES

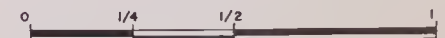


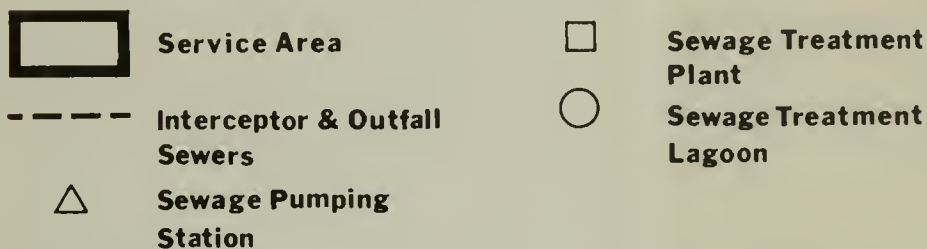
EXHIBIT NO. 38



FLATHEAD COUNTY MONTANA

LEGEND

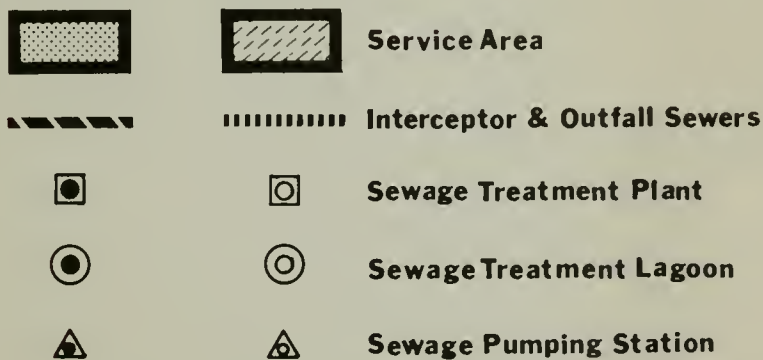
EXISTING



PROPOSED

5 - 10YR. EST. NEEDS

10-20YR. EST. NEEDS



MC GREGOR LAKE SEWER SERVICE AREA

SCALE IN MILES

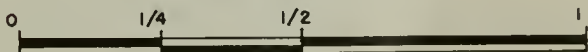
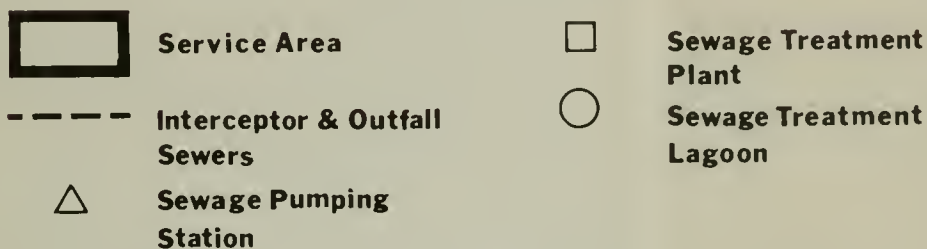


EXHIBIT NO. 40

FLATHEAD COUNTY MONTANA

LEGEND

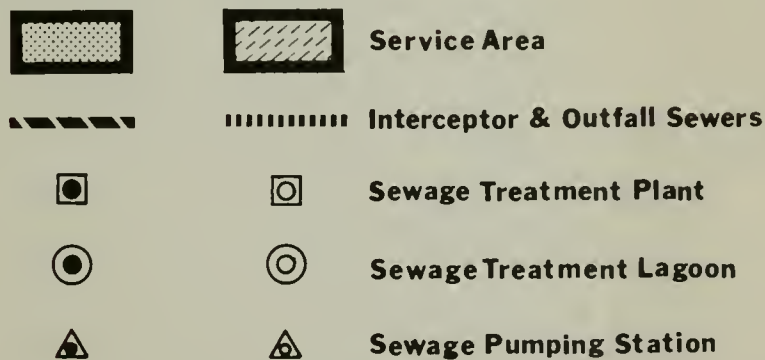
EXISTING



PROPOSED

5 - 10YR. EST. NEEDS

10-20YR. EST. NEEDS



MC GREGOR LAKE SEWER SERVICE AREA

SCALE IN MILES

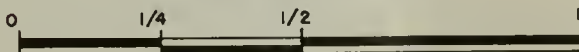
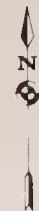


EXHIBIT NO. 40

FLATHEAD COUNTY MONTANA



LEGEND

EXISTING

- | | | | |
|---|------------------------------|---|-------------------------|
|  | Service Area |  | Sewage Treatment Plant |
|  | Interceptor & Outfall Sewers |  | Sewage Treatment Lagoon |
|  | Sewage Pumping Station | | |

PROPOSED

5 - 10YR. EST. NEEDS

10-20YR. EST. NEEDS

- | | | |
|---|---|------------------------------|
|  |  | Service Area |
|  |  | Interceptor & Outfall Sewers |
|  |  | Sewage Treatment Plant |
|  |  | Sewage Treatment Lagoon |
|  |  | Sewage Pumping Station |

MARTIN CITY SEWER SERVICE AREA

SCALE IN MILES

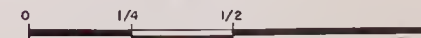


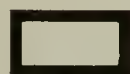
EXHIBIT NO. 39



FLATHEAD COUNTY MONTANA

LEGEND

EXISTING



Service Area



Sewage Treatment
Plant



Interceptor & Outfall
Sewers



Sewage Treatment
Lagoon



Sewage Pumping
Station

PROPOSED

5 - 10YR. EST. NEEDS



10-20YR. EST. NEEDS



Service Area



Interceptor & Outfall Sewers



Sewage Treatment Plant



Sewage Treatment Lagoon



Sewage Pumping Station

MOUNTAIN VIEW SEWER SERVICE AREA

SCALE IN MILES

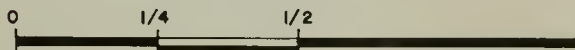


EXHIBIT NO. 41



FLATHEAD COUNTY MONTANA

LEGEND

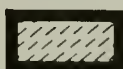
EXISTING

	Service Area		Sewage Treatment Plant
	Interceptor & Outfall Sewers		Sewage Treatment Lagoon
	Sewage Pumping Station		

PROPOSED

5 - 10YR. EST. NEEDS

10-20YR. EST. NEEDS



Service Area



Interceptor & Outfall Sewers



Sewage Treatment Plant



Sewage Treatment Lagoon



Sewage Pumping Station

MOUNTAIN VIEW SEWER SERVICE AREA

SCALE IN MILES

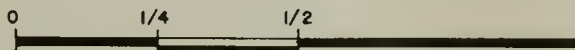


EXHIBIT NO. 41

FLATHEAD COUNTY MONTANA

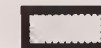
LEGEND

EXISTING

- | | |
|--|---|
|  Service Area |  Sewage Treatment Plant |
|  Interceptor & Outfall Sewers |  Sewage Treatment Lagoon |
|  Sewage Pumping Station | |

PROPOSED

5 - 10YR. EST. NEEDS



10-20YR. EST. NEEDS



Service Area

Interceptor & Outfall Sewers

Sewage Treatment Plant

Sewage Treatment Lagoon

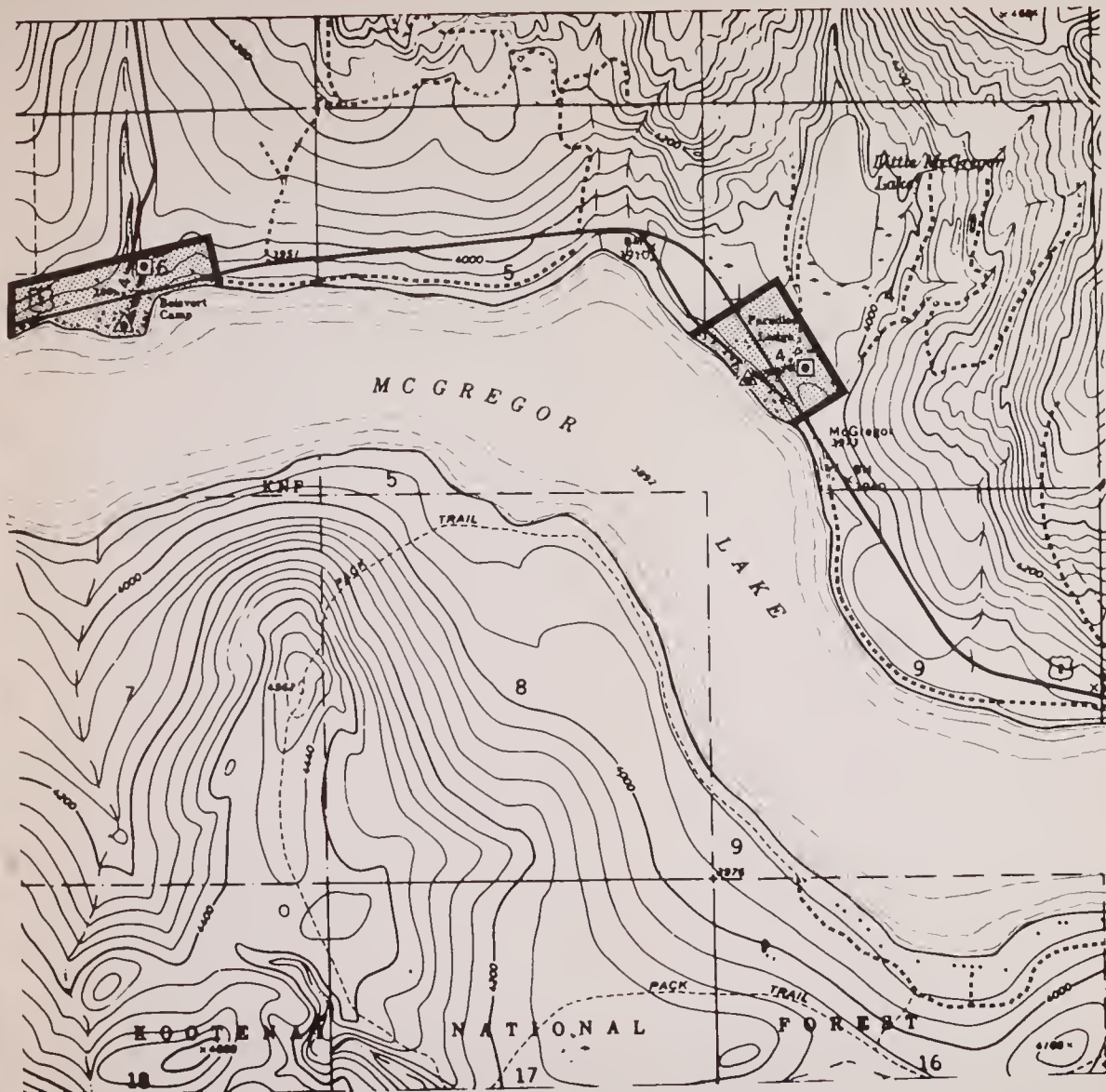
Sewage Pumping Station

MCGREGOR LAKE SEWER SERVICE AREA

SCALE IN MILES



EXHIBIT NO. 40

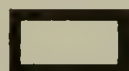




FLATHEAD COUNTY MONTANA

LEGEND

EXISTING



Service Area



Sewage Treatment
Plant



Interceptor & Outfall
Sewers



Sewage Treatment
Lagoon



Sewage Pumping
Station

PROPOSED

5 - 10YR.
EST. NEEDS

10-20YR.
EST. NEEDS



Service Area



Interceptor & Outfall Sewers



Sewage Treatment Plant



Sewage Treatment Lagoon



Sewage Pumping Station

OLNEY SEWER SERVICE AREA

SCALE IN MILES

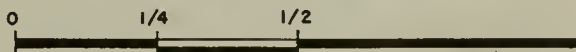


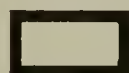
EXHIBIT NO. 42



FLATHEAD COUNTY MONTANA

LEGEND

EXISTING



Service Area



Interceptor & Outfall
Sewers



Sewage Pumping
Station



Sewage Treatment
Plant



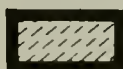
Sewage Treatment
Lagoon

PROPOSED

5 - 10YR. EST. NEEDS



10-20YR. EST. NEEDS



Service Area

Interceptor & Outfall Sewers

Sewage Treatment Plant

Sewage Treatment Lagoon

Sewage Pumping Station

OLNEY SEWER SERVICE AREA

SCALE IN MILES

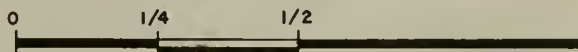


EXHIBIT NO. 42

FLATHEAD COUNTY MONTANA

LEGEND

EXISTING

- | | | | |
|---|------------------------------|---|-------------------------|
|  | Service Area |  | Sewage Treatment Plant |
|  | Interceptor & Outfall Sewers |  | Sewage Treatment Lagoon |
|  | Sewage Pumping Station | | |

PROPOSED

5 - 10YR. EST. NEEDS



10-20YR. EST. NEEDS



Service Area

Interceptor & Outfall Sewers

Sewage Treatment Plant

Sewage Treatment Lagoon

Sewage Pumping Station

MOUNTAIN VIEW SEWER SERVICE AREA

SCALE IN MILES

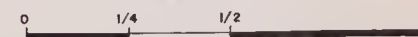
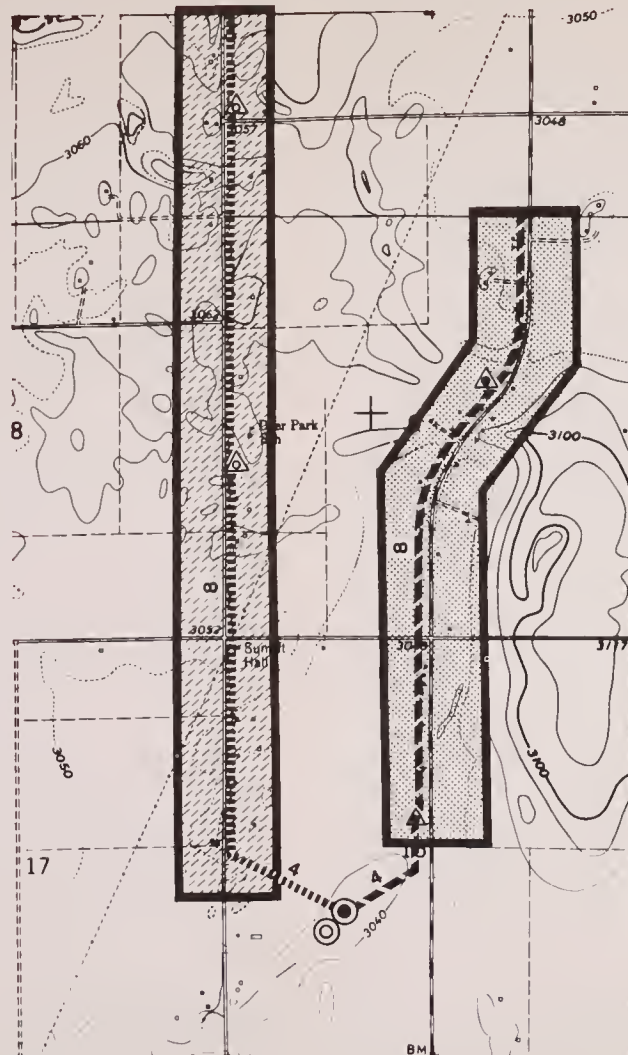


EXHIBIT NO. 41

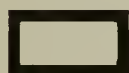




FLATHEAD COUNTY MONTANA

LEGEND

EXISTING



Service Area



Sewage Treatment
Plant



Interceptor & Outfall
Sewers



Sewage Treatment
Lagoon



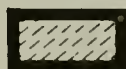
Sewage Pumping
Station

PROPOSED

5 - 10YR. EST. NEEDS



10-20YR. EST. NEEDS



Service Area



Interceptor & Outfall Sewers



Sewage Treatment Plant



Sewage Treatment Lagoon



Sewage Pumping Station

SOMERS SEWER SERVICE AREA

SCALE IN MILES

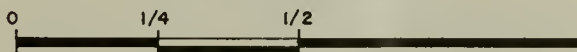


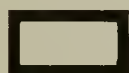
EXHIBIT NO. 43



FLATHEAD COUNTY MONTANA

LEGEND

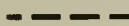
EXISTING



Service Area



Sewage Treatment
Plant



Interceptor & Outfall
Sewers



Sewage Treatment
Lagoon



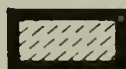
Sewage Pumping
Station

PROPOSED

5 - 10YR. EST. NEEDS



10-20YR. EST. NEEDS



Service Area



Interceptor & Outfall Sewers



Sewage Treatment Plant



Sewage Treatment Lagoon



Sewage Pumping Station

SOMERS SEWER SERVICE AREA

SCALE IN MILES

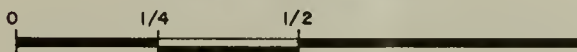


EXHIBIT NO. 43

NO. 1

EXISTING



Interceptor & Outfall Sewers



5

C

Sewage Treatment Lagoon

**S - 10 YR.
EST. NEEDS**

☐

**10-20YR.
EST. NEEDS**



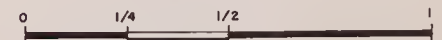
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Sewage Treatment Plant

Sewage Treatment Lagoon

Sewage Pumping Station

SCALE IN MILES

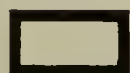




FLATHEAD COUNTY MONTANA

LEGEND

EXISTING



Service Area



Sewage Treatment
Plant



Interceptor & Outfall
Sewers



Sewage Treatment
Lagoon



Sewage Pumping
Station

PROPOSED

5 - 10YR. EST. NEEDS



10-20YR. EST. NEEDS



Service Area



Interceptor & Outfall Sewers



Sewage Treatment Plant



Sewage Treatment Lagoon



Sewage Pumping Station

WEST GLACIER SEWER SERVICE AREA

SCALE IN MILES

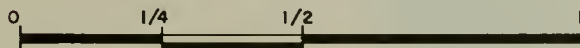


EXHIBIT NO. 44

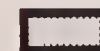
FLATHEAD COUNTY MONTANA

LEGEND EXISTING

- | | | | |
|---|------------------------------|---|-------------------------|
|  | Service Area |  | Sewage Treatment Plant |
|  | Interceptor & Outfall Sewers |  | Sewage Treatment Lagoon |
|  | Sewage Pumping Station | | |

PROPOSED

5 - 10YR. EST. NEEDS



10 - 20YR. EST. NEEDS



Service Area

Interceptor & Outfall Sewers

Sewage Treatment Plant

Sewage Treatment Lagoon

Sewage Pumping Station

SOMERS SEWER SERVICE AREA

SCALE IN MILES

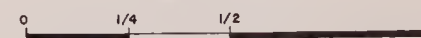
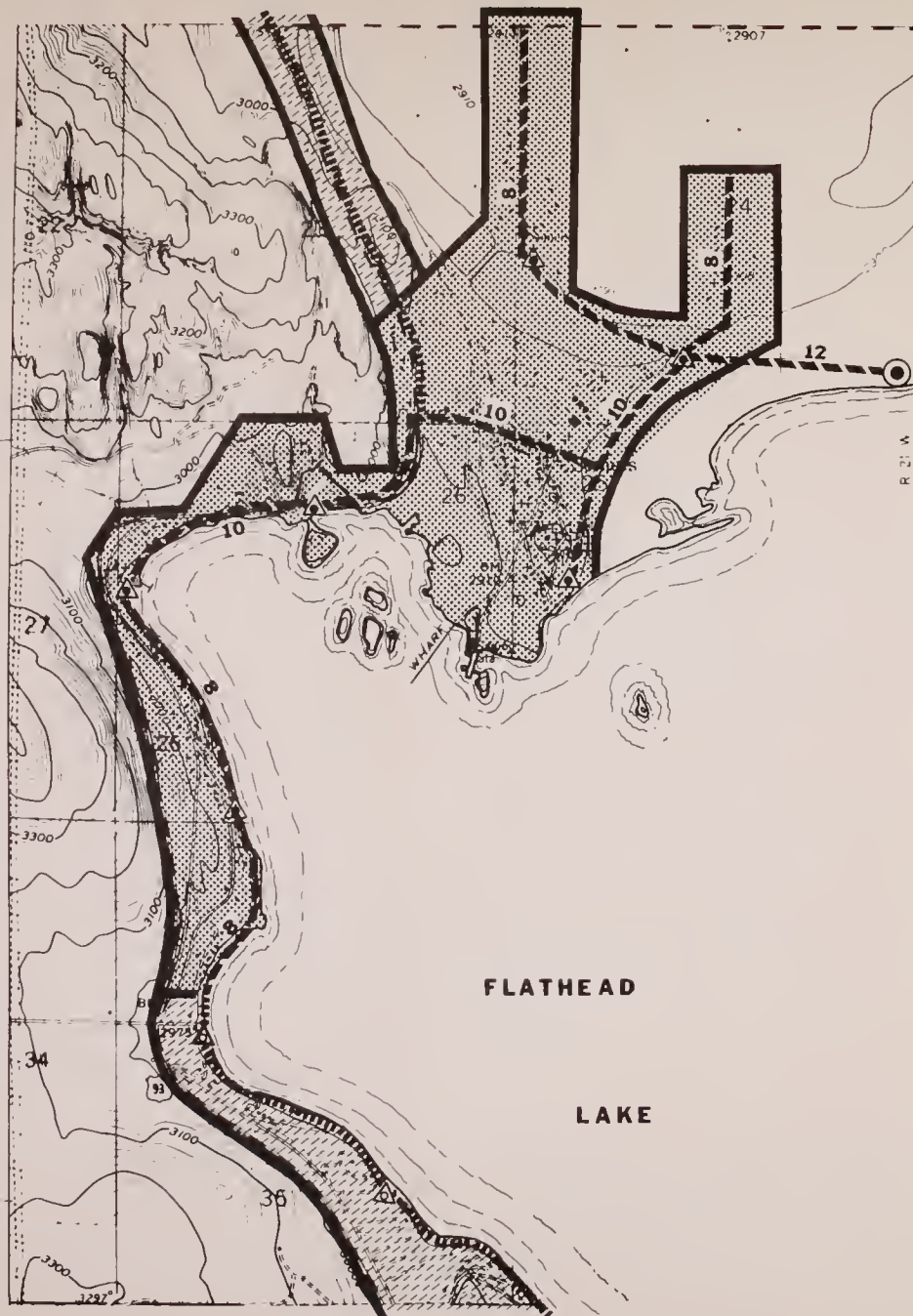


EXHIBIT NO. 43

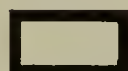




FLATHEAD COUNTY MONTANA

LEGEND

EXISTING



Service Area



Sewage Treatment
Plant



Interceptor & Outfall
Sewers



Sewage Treatment
Lagoon



Sewage Pumping
Station

PROPOSED

5 - 10YR. EST. NEEDS



10-20YR. EST. NEEDS



Service Area



Interceptor & Outfall Sewers



Sewage Treatment Plant



Sewage Treatment Lagoon



Sewage Pumping Station

WEST GLACIER SEWER SERVICE AREA

SCALE IN MILES

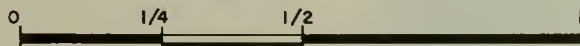


EXHIBIT NO. 44

FLATHEAD COUNTY MONTANA

LEGEND

EXISTING

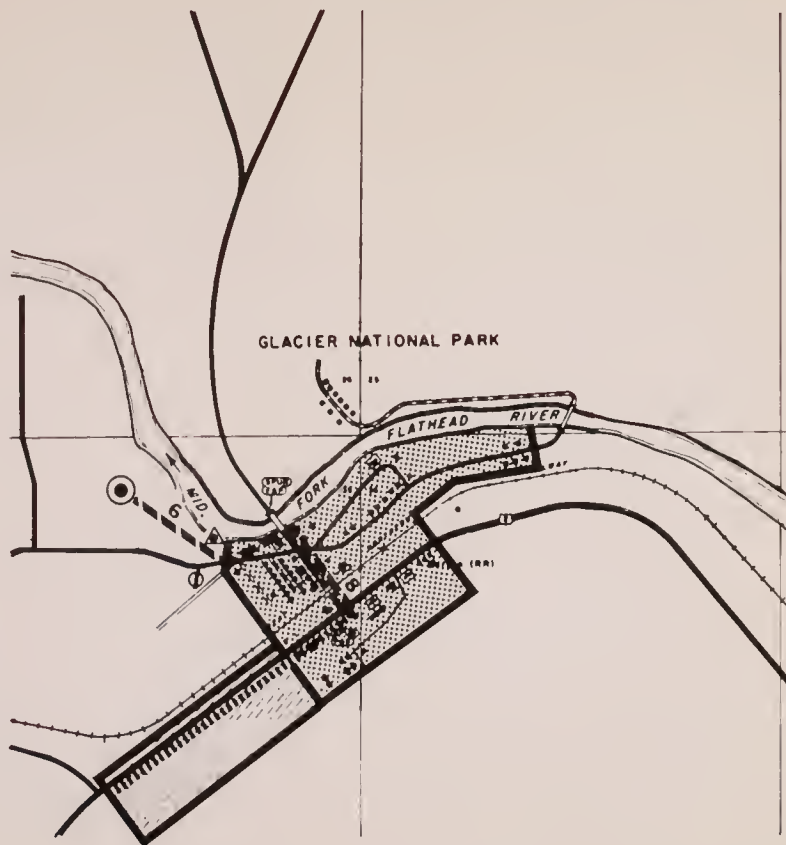
- | | | | |
|---|------------------------------|---|-------------------------|
|  | Service Area |  | Sewage Treatment Plant |
|  | Interceptor & Outfall Sewers |  | Sewage Treatment Lagoon |
|  | Sewage Pumping Station | | |

PROPOSED

5 - 10YR. EST. NEEDS

10-20YR. EST. NEEDS

- | | | |
|---|---|------------------------------|
|  |  | Service Area |
|  |  | Interceptor & Outfall Sewers |
|  |  | Sewage Treatment Plant |
|  |  | Sewage Treatment Lagoon |
|  |  | Sewage Pumping Station |



WEST GLACIER SEWER SERVICE AREA

SCALE IN MILES

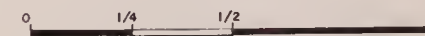


EXHIBIT NO. 44

C631

029.3

Flathead County, Montana

AUTHOR Comprehensive County Water
and Sewer Plan

TITLE Thomas, Dean & Hoskins, Inc.

C631

029.3

C631

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Flathead County, Montana

AUTHOR Comprehensive County Water
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